BULLETIN

of

THE CITADEL

THE MILITARY COLLEGE OF SOUTH CAROLINA

FOUNDED 1842

CATALOGUE ISSUE

1948-1949

CHARLESTON, S. C.

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THE PURPOSE OF MILITARY TRAINING AT THE CITADEL

The Citadel is a military college, but its chief concern is to prepare men for civil life. Because of the military record of Citadel graduates, there has grown up an erroneous impression that the institution exists to prepare men for war. The College is justly proud of the war record of its sons, and it will always expect them to respond in national emergencies; but its chief purpose is to prepare men for civil pursuits by giving them a sound education reinforced by the best features of military training.

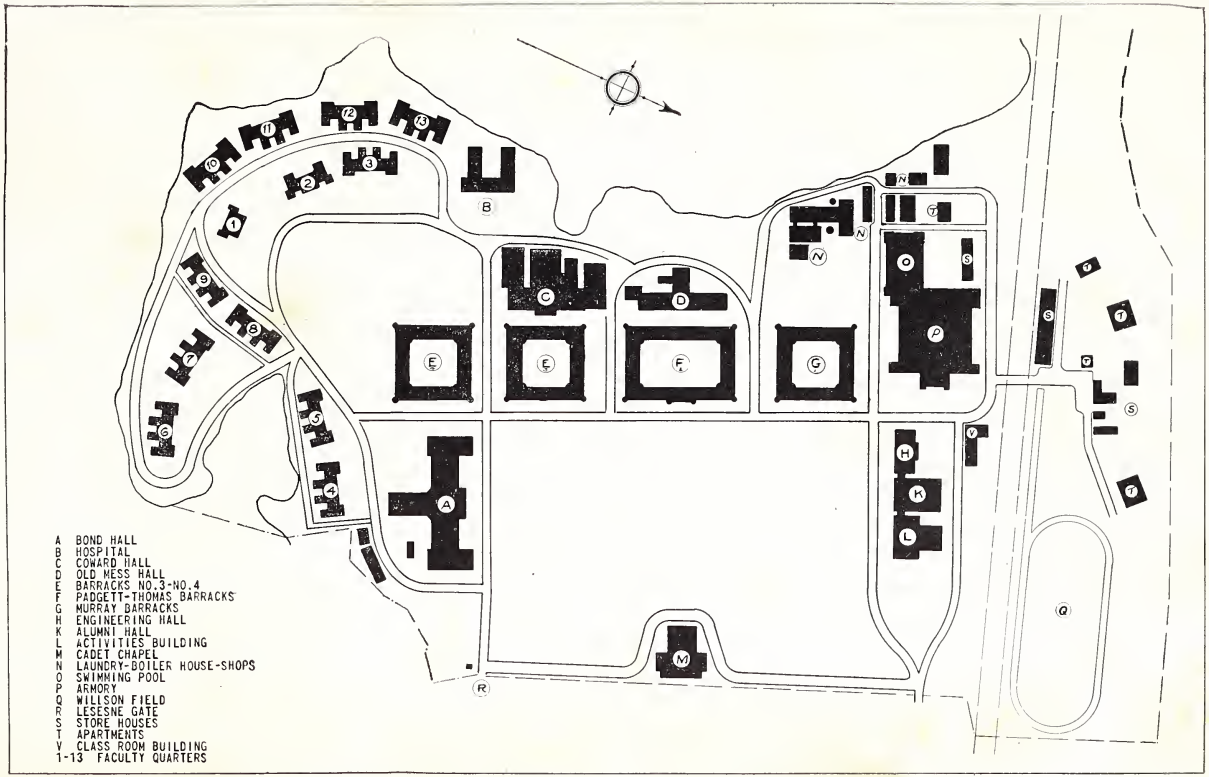
Military training teaches the value of system and order in approaching tasks, of physical and mental fitness, and of alertness and self-confidence. It teaches how to command and how to obey, how to organize and coordinate, and how to maintain morale and discipline. Most important of all, it instills the conviction that any sacrifice must be made when principle is involved and that truth, honor, and integrity are the basis of character. Such virtues woven into the lives of men will produce results for good irrespective of the field in which they are applied.

A civic leader, no less than a military commander, must be prepared to meet difficult or hazardous situations courageously and effectively, to make decisions and enforce them, to lead when it is his duty to lead, and to follow when it is his duty to follow, and to inspire confidence through his resourcefulness, honesty, and courage. Such qualities The Citadel attempts to develop in its cadets.

The training is not given at the expense of academic education. On the contrary, the aim is to make academic training more complete and effective through development of soldierly virtues. Graduates in many vocations and in many parts of the world attest the value of the rigorous regimen of classroom, barracks, and drill field.

Many desirable characteristics do not grow out of scholarship alone; traditions and codes may more profoundly influence college men than the most scholarly lectures. For this reason, to its academic training, which it assiduously seeks to make vital, The Citadel adds the code of the cadet and gentleman. The visible symbol of this is the proudly worn uniform, a constant reminder that Alma Mater expects of every son the poise and culture of a student, the public spirit and unselfishness of an enlightened citizen, the courage and loyalty of a soldier, and the honor and bearing of a gentleman.

"I call, therefore, a complete and generous education that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war."—MILTON.



CAMPUS OF THE CITADEL

COLLEGE CALENDAR FOR 1948-1949

1948

June 21, Monday, 10:00 A. M.	Summer session begins
July 30-31	First half summer session examinations
August 2	Second half summer session begins
September 10-11	Second half summer session examinations
September 11	Summer session ends
September 21, Tuesday	New cadets report for freshman week
September 27, Monday, 10:00 A. M.	Fall quarter begins
November 25, Thursday	Thanksgiving Day; a holiday
December 13-17	Examinations
December 18, Saturday	Fall quarter ends; Christmas furlough begins

1949

January 4, Tuesday, 10:00 A. M.	Winter quarter begins; Christmas furlough ends
March 14-18	Examinations
March 19, Saturday	Winter quarter ends; furlough begins
March 28, Monday, 10:00 A. M.	Spring quarter begins; furlough ends
May 30-June 3	Examinations
June 4, Saturday	Spring quarter ends; summer furlough begins

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* On leave of absence, 1947-1948.

HISTORICAL SKETCH

The Citadel, The Military College of South Carolina, has a history rich in interest and significance. The story unfolds from the humble beginnings in 1843 on Marion Square in the heart of Charleston with twenty young South Carolina cadets and ranges through the vicissitudes of war and adversity to an institution now housed in a great group of buildings on the Ashley River in Charleston with cadets from the length and breadth of the United States. There have been breaks in the continuity of the story, but in the spirit and purpose of the institution the thread is unbroken. Despite the changes of time and circumstance, the group on the Ashley to-day is in unbroken spiritual continuity with the group that reported to Marion Square in 1843. The vision of the founders was that citizens of a free country should be trained to serve their country in peace and war, and thus they founded an institution devoted to a union of military and academic education and designed to achieve this dual objective. From this objective the institution has never departed.

Before 1842 the State of South Carolina had two depositories for its arms and munitions of war—one known as The Citadel, in Charleston; the other known as The Arsenal, in Columbia. These were guarded by companies of enlisted men and trained officers and were maintained at an expense of twenty-four thousand dollars a year.

It was Governor Richardson who suggested that these garrisons be replaced by young men, who, while serving as guards, should receive military training and instruction in the practical and mechanical arts. Under the administration of his successor, Governor Hammond, an act of the legislature was passed on December 20, 1842, creating The Citadel and Arsenal Academies.

The board appointed by the Governor to carry out the purpose of the act lost no time in performing its duty, and the faculty of The Citadel was elected on February 23 following. By March 20 both The Citadel and The Arsenal were in operation.

In arranging the course of studies for The Citadel, the 1843 report of the board to the General Assembly says:

"The Board has aimed at a system of education at once scientific and practical, which, if their original design is carried out, will eminently qualify the cadets there taught for almost any station and condition of life.

"During the course, besides the usual branches taught at the primary schools in the State, they will be instructed in the history of South Carolina, modern history, the French language, every department of mathematics, bookkeeping, rhetoric, moral philosophy, architectural and

topographical drawing, natural philosophy, chemistry, geology, mineralogy, botany, civil and military engineering, the constitutional law of the United States, and the law of nations. In addition to that course, they will be instructed in the duties of the soldier, the school of the company and the battalion, the science of war, the evolution of the line, and the duties of the commissioned officers."

The Arsenal, at first co-equal with The Citadel, was soon incorporated with it. Cadets spent the first year at The Arsenal and then transferred to The Citadel for the remaining three years of the course.

In 1846 the first class, numbering six men, was graduated from The Citadel. C. C. Tew, the first-honor man of his class and proto-graduate of the institution, afterwards founded the Hillsboro Military Academy, North Carolina, was Colonel of North Carolina troops in the Confederate Army, and was killed at Sharpsburg, September, 1862, while commanding Anderson's brigade.

The value to the State of the military training at The Citadel is strikingly shown by the fact that, of the two hundred and forty graduates before the close of the War between the States, about two hundred were officers in the Confederate service, and forty-three laid down their lives upon the battlefield. The list of Citadel officers in that great conflict is an honor roll of which any institution might well be proud.

There are two dates in the history of the State military academies which mark the boundaries of this great military struggle of the last century. On January 9, 1861, Major P. F. Stevens, Superintendent and a graduate of The Citadel, in command of a detachment of Citadel Cadets manning a battery of 24-pounders on Morris Island, drove off the steamer, *Star of the West,* which was attempting the relief of Fort Sumter—thus firing the first hostile shot of the war. On May 1, 1865, Captain J. P. Thomas, Superintendent of The Arsenal, and also a graduate of The Citadel, with the Arsenal cadets at his command, had a skirmish with Stoneman's raiders, near Williamston, S. C., thus firing the last shot of the war discharged by any organized body of Confederate troops east of the Mississippi.

At the fall of Charleston in February, 1865, The Citadel was occupied by Federal troops. The corps of cadets was at that time in the field and never returned to the institution, which, in spite of the best efforts of the State to recover it, continued in the hands of the United States military authorities until 1881.

In that year Governor Hagood said in his annual message to the General Assembly:

"The State Military Academy at Charleston has been suspended in its operations since the late civil war. This has been due to the fact that the building known as The Citadel, in which it has its seat, has been since the close of the war in the possession of the United States authorities, and has been used by them until recently as a military post.

"It is understood that the General Government is now prepared to restore it to the custody of the State. It is desirable that this property be recovered and again devoted to the purpose of higher education, in the facilities for which our needs are greater than the source of supply.

"A measure will probably be submitted to you at this session to accomplish this purpose and you will permit me to say that, in my judgment, it is now practicable to reopen the school, and it ought to be done."

An act to authorize the reopening of the South Carolina Military Academy was passed by the General Assembly, and approved January 31, 1882. The Citadel was reopened on October 1, 1882, with 189 cadets and has been in continuous and successful operation ever since.

Since the reopening of The Citadel in 1882, many graduates have been given permanent commissions in the armed forces of the United States, and during the Spanish-American War and both World Wars hundreds of graduates and former cadets served as temporary officers. In all emergencies since the founding of The Citadel its graduates and former students have thus strikingly demonstrated the value to the nation of the military training given at the college.

In 1910 the legislature fixed the title of the institution as The Citadel, The Military College of South Carolina.

In 1918 the City of Charleston offered the State a superb tract of nearly 200 acres of land adjacent to Hampton Park and beautifully situated on the banks of the Ashley River, for the erection of a greater Citadel. The legislature accepted the offer and in 1919 and 1920 made appropriations for the necessary buildings.

On September 20, 1922, the college opened in its commodious new quarters, which had been provided at a cost of more than a million dollars. Moreover, since that date numerous improvements and additions have been made. These are described in the pages which immediately follow.

GROUNDS AND BUILDINGS

The Citadel is located on a seventy-eight-acre campus in the northwestern section of the City of Charleston. On the west lies a wide expanse of grass-covered marsh and the Ashley River; on the north, one of the better residential sections of the city; on the south, another wide tidal marsh, across which the river and the lower sections of the city are visible in the distance; and on the east, and adjoining the campus, is Hampton Park, one of the famed beauty spots of the Low Country. Thus located, the college has all of the advantages of proximity to the city combined with the quiet and beauty of a rural location. The view to the west across the marshes and river is one of rare and changing aspect; and the park to the east, with its wealth of bloom and foliage,

gives to the campus an approach of surpassing beauty. The campus itself, with its winding roads, stately live oaks, impressive buildings, and pleasing vistas across green lawns bordered by flowering yards, is a fit habitation for the college and in complete harmony with its high ideals and purposes.

The buildings on the campus, both in design and location, follow the carefully prepared plan made by a firm of distinguished architects long before ground was broken. The general style of the architecture is Spanish-Moorish, with suitable adaptations to local conditions.

There are on the west side of the large drill field four imposing barracks buildings with a total capacity of 2,000. The barracks are rectangular in shape and have large, paved interior courts, which are enclosed by galleries.

The rooms are designed to accommodate two cadets each. These buildings are the living quarters of cadets, and all college activities not in keeping with the community life of the buildings are carried on in other structures. The buildings are so arranged that there is no fire hazard to occupants. Every room has running hot and cold water and I. E. S. lamps.

To the south of the drill field and facing north, rises the imposing facade of Bond Hall. Here are housed most of the academic departments, the administrative headquarters of the college, and the library. A large annex to the rear of this building provides for the library stacks and for additional classrooms.

On the north of the drill field stands Alumni Hall, in which are centered athletic and recreational activities. To the west of Alumni Hall is Engineering Hall, in which is housed the Department of Civil Engineering. A third story to this building was added in 1940. Another building located east of Alumni Hall and facing south was completed in 1939. In this structure are grouped administrative offices, cadet service activities, reception rooms for visitors, headquarters for faculty and cadet publications, and an assembly room, which is equipped with a stage, dressing rooms, and facilities for showing pictures.

On the east of the campus, outlined against the rich foliage of Hampton Park and facing the central barracks across the short dimension of the drill field, rises the Cadet Chapel, perhaps the most distinguished building on the campus. Cruciform in shape and severe in its exterior lines, this building conforms in the crenelated parapets of its entrance to the prevailing architectural style of the campus; but above this the lines and details of the building become distinctly ecclesiastical in character, thus giving visible evidence of the purpose of the structure. The interior is extraordinarily striking in form, arrangement, and quality of material used. All trim is of Indiana limestone; the aisles are paved with the richly colored Crab Orchard sandstone; and the chancel, with colored Tennessee marble. All woodwork, in-

cluding pews, wainscots, chancel furniture, and the exposed wood trusses and panelled ceiling, is finished in oak brown. The cathedral-like proportions and the impressive churchly atmosphere of the structure are greatly enhanced by the pipe organ. This instrument has been acclaimed by many organists to be of the highest quality. It is the desire of the college authorities to make this structure the focal point of the spiritual life of the institution and a constant reminder of the ideals and traditions of the institution. In furtherance of this end, the clearstory windows carry handsome stained glass memorials to Citadel men. The great window over the chancel is a memorial to all Citadel men who have given their lives in the military service; the small aisle windows are reserved as class memorials, the stained glass figures representing episodes in the life of Christ. An attendant is present in the Chapel every day to receive visitors, and thousands have already signed the visitors' book.

Behind the new barracks is the cadet mess hall. The first part of this structure, seating 1,000, was completed in 1937, and more recent additions have doubled the seating capacity. This building is fully equipped with every needful facility for storing, preparing, and serving food in the most approved manner. Equipment includes a bakery, cold-storage plant, ice-making plant, circulating cold water supply, ice cream plant, gas ranges, gas bread toasters, dish-washing machines, forced draft heating and ventilating system, and other appliances found in the most modern kitchens and dining rooms. Dining room floors are of terrazzo, kitchen floors of ceramic tile, and all wainscots of glazed brick, thus making it easy to maintain cleanliness and sanitation.

Near the mess hall and on the west edge of the campus lies the Mary Bennett Murray Hospital. This hospital conforms to the most modern standards and affords complete facilities for treating all ordinary cases of sickness. It is presided over by the college surgeon and by a head nurse and her assistant. In order to provide the additional facilities now needed because of the increased size of the student body, an annex has been built.

The laundry, heating plant, carpenter and machine shops, and artillery garages are located in the northwest corner of the campus, where they are well screened from general view. The laundry is equipped to handle all cadet work. All buildings on the campus are heated from the central heating plant, except the chapel, which has a separate plant. Electricity, water, gas, sewerage, drainage, and steam lines serve all buildings, including officers' quarters.

The southern area of the campus is occupied by the residences of the faculty and staff, the community now consisting of the president's house, a duplex house, and eleven four-family apartment houses, six of which were completed in 1937 and four in 1939.

The facilities of Alumni Hall for athletic, recreational, and social activities having for several years been inadequate, there was included

in the group of buildings completed in December, 1939, an armory and field house which is located just north of Murray Barracks in the northwest section of the campus. This building serves as headquarters for the military activities, for indoor drills, athletic contests, dances, and other indoor activities and functions at which large crowds are assembled. The main room of the armory is 150 feet by 200 feet, with the roof at the center of the room, carried by great steel arches, 65 feet above the floor. Galleries running around the four sides of this room will seat approximately 2,500. Under the galleries are armories for storing military equipment and supplies, dressing rooms, and entrances to the drill hall. The offices of the military department are located in the head house on the east of the building. The exterior of the building, following the characteristic crenelated parapeted style of the campus, with its gracefully arched, copper-covered roof, corner pylons, heavily buttressed end elevations with a great expanse of high arched-top windows, is imposing and dignified.

A wing of the armory houses a 45 ft. by 105 ft. swimming pool which is available for year-round use. The pool is equipped with pressure filters and complete sterilizing and heating equipment to assure cleanliness and correct temperature of water.

All of the main roads of the campus are paved, and the buildings are connected by concrete sidewalks. In the past few years, hundreds of trees and shrubs have been added to the grounds.

On the extreme north end of the campus is located the cadet athletic field. This includes space for a football field, a quarter-mile running track, with a 100-yard straightaway, and ample space for other field sports. There are ten tennis courts.

Since 1935, approximately $2,500,000.00 has been spent on the physical plant of the college. This has resulted in more than doubling its capacity and in notable improvements in the appearance and utility of the property for educational purposes. All buildings have been constructed to a high standard of quality and in conformity with the original plans as prepared in 1919 when the present site of the college was acquired. Nevertheless, the requirements of the post-war period have caused the inauguration of an additional building program which will cost about $500,000.00. This program contemplates the construction of a building with sixteen faculty apartments, another ward to the hospital, and an additional academic building.

REQUIREMENTS FOR ADMISSION

Applicants for admission to The Citadel must be not less than sixteen nor more than twenty-one years of age. They must be at least five feet in height and physically able to do military duty. See statement about physical examinations under heading "General Information." A certificate of vaccination is required.

Formal application for admission must be submitted by parent or guardian on the blank provided with this catalogue and should be mailed to The Registrar, The Citadel, Charleston, S. C.

The requirements for admission to the freshman class are those prescribed by the Association of Colleges and Secondary Schools of the Southern States, of which The Citadel is a member. The standards of the Association require "the satisfactory completion of a four-year course of not less than fifteen units in a secondary school approved by a recognized accrediting agency, or in a secondary school that is a member of this Association, or the equivalent of such a course as shown by examination."

In accordance with the above, applicants are admitted to The Citadel either by certificate or by examination. Certificates are accepted only from accredited schools, and should be submitted directly to the college by the principal or superintendent of such school.

The required fifteen units must include:

1. Three units of English.
2. Three or more units as a principal sequence selected from one of the following groups:
   (a) A classical language.
   (b) A modern language other than English.
   (c) Social Science (history, civics, economics, problems of democracy, sociology, geography, general business science, and commercial law.)
   (d) Mathematics.
   (e) Natural Science (physics, chemistry, botany, zoology, general biology, general science, physiology, physiography.)
3. Two or more units as a secondary sequence selected from a second group listed under 2.
4. Two units or less in subjects selected from any of the groups listed under 2.

   (Total 10 units in English and groups a-e.)
5. Five units selected from any of the secondary-school subjects accepted by an approved school for its diploma.

Mathematics must be selected as either a principal or a secondary sequence and must include one and one-half or two units of algebra and one unit of plane geometry.

One unit of history must be included as a part of a social science sequence or else as one of the five free electives.

Admission by Examination

Applicants whose credits comply with the requirements for admission to The Citadel but who are not graduates of an accredited secondary school must have their work validated by entrance examinations.

Advanced Standing

The courses of study at The Citadel are outlined on pages 49 through 59, and no student will be accepted as a candidate for a diploma who has not had this work, or its equivalent. It is therefore recommended that reference be made to the requirements for the freshman and sophomore years before application is made for advanced standing. An applicant for advanced standing must present an honorable discharge from the college previously attended, together with a transcript of his college record and entrance credits. It is also advisable to submit a copy of the college catalogue, in which the applicant has marked the courses which he has taken.

An applicant who has had military training and who desires advanced standing in Military Science and Tactics courses must present the necessary credentials in conformity with War Department requirements.

Military Science is a required subject, and all applicants for admission to The Citadel with advanced standing must present credit for the Basic R.O.T.C. courses which they would have taken as cadets at The Citadel. For sophomore standing credit for first year Basic Military Science and Tactics is required, and for junior standing on applicant must have completed the Basic work prescribed for the senior division R.O.T.C.

EXPENSES

Since The Citadel is a state institution, it is not operated for profit.

Registration and Tuition

The registration fee is $6.00 and is not returnable. Of this amount, $2.00 is payable when the cadet is accepted for admission. The balance is divided between the second and third instalments. A charge of $5.00 is made for late registration. The tuition fee is $80.00 for South Carolina cadets and $250.00 for out-of-state cadets. This fee is for the college year of nine months.

Maintenance

The charge for board is $360.00; for room, heat, light, water, laundry, and hospital $100.00. There is a breakage fee, not returnable, of $5.00.

The fees stated above and in succeeding tables are subject to increase at any time to meet actual minimum expenses.

Uniforms

As all cadets are required to be in uniform which will be issued at the college, new students need not come with any supply of civilian clothing other than the suits they wear. It is advisable to bring inexpensive trunks or suitcases.

The cost of uniforms and other clothing varies among students, and from year to year. Cadets should always have a deposit for clothing to their credit, no clothes being issued otherwise. The uniforms should last two or more years if cadets are careful, and the cost of clothing after the first year should be small. The average cost for the four years has increased.

For a new cadet the payments for uniforms and equipment are as follows: September 21, $85.00; January 4, $85.00. Overcoats are optional and their cost is not included in the foregoing payments. Orders for overcoats should be placed with the Quartermaster as promptly as possible after the opening of the session. Many new cadets buy used overcoats, thus saving a part of this expense. All purchases of used uniforms must have the approval of an inspecting officer.

Except for uniforms issued to cadets upon entering the college, coats, trousers, and overcoats are tailored to individual measurements by the college tailor.

While the cost of uniforms is usually covered by the prescribed fees, individual needs may be such as to require charges in excess of these amounts. Parts of uniform and book deposits not used will be refunded.

Other Fees

Other fees required are:

Student Activities Fee—$37.50. This is a direct charge and no part of it is returnable. It is allocated to the various student activities for their support and maintenance. It is not an admission fee. Students are admitted to all games free of charge.

Books and laboratory fees $50.00

For freshmen who elect engineering drawing—drawing equipment 35.00

Class fund is optional and is payable in installments of $7.00, $4.00 and $4.00 on the first, second and third installments, respectively. This fund is used for formal dances 15.00

Summary of Freshman Expenses

	S. C. Cadets	*Out-of-State Cadets*
Registration	$ 6.00+	$ 6.00+
Tuition	80.00	250.00
Uniforms	170.00	170.00
Maintenance:		
Board (Subject to change)	360.00	360.00
Room, heat, lights, water, laundry, hospital and janitor service	100.00	100.00
Books and laboratory fees	50.00	50.00
Breakage	5.00	5.00
Student activities fee	37.50	37.50
	$ 808.50	$ 978.50
For freshmen who elect engineering drawing include	$ 35.00	$ 35.00

Payments For Freshmen

	S. C. Cadets	*Out-of-State Cadets*
First installment, September 20, 1949	$ 368.50	$423.50
Second installment, January 3, 1950	243.00	303.00
Third installment, March 28, 1950	197.00	252.00
	$ 808.50	$978.50
For freshmen who elect engineering drawing include	35.00	35.00

+ Registration fee is collected in three installments of $2.00 each.

Payments for Old Cadets

The payments for old cadets are the same as for freshmen except for uniforms, the cost of which is usually about $100.00 less. Payments are due on the same dates as for freshmen.

Return of Fees To Withdrawn Cadets

The size of the faculty and staff and other commitments of the college are based on the enrolment at the beginning of a term. The fees collected are used to meet these commitments, many of which continue throughout the year. When cadets withdraw, it is necessary, therefore, to retain all instalments that have been paid on the tuition, registration and cadet activities. Unused portions of other fees or service charges are returned.

Payments

In settlement of all fees remittance should be made by money order or check made payable to E. M. Tiller, Quartermaster, and mailed to him direct.

The low fees and small appropriations at The Citadel are based on minimum current expenses. There is no reserve fund to carry accounts. All fees must therefore be paid in advance in the amounts and on the dates stated in the preceding tabulation. Where patrons are unable to make such payments it will be necessary to withdraw the cadets concerned.

Clothing and Bedding

All cadets are required to furnish their own bed clothes. Beds and mattresses are provided by the college, but pillows are not. Two mattress covers will be issued at cost to each cadet. Cadets should come provided with the following articles:

Six white shirts	Six towels
Six suits of underwear	One pillow
Three pajamas	Three pillow cases
One bathrobe	Four sheets for single bed
Six pairs of black socks	Two pairs of blankets
One dozen handkerchiefs	One comfort
	Toilet articles

Two laundry bags about 24x30 inches.
Two pairs *black* shoes and one pair white shoes with rubber heels and plain toes.

Before the opening of the session, a new cadet is assigned a laundry number, which he retains as long as he remains at The Citadel. Clothing should be marked with the name and full initials, as well as with laun-

dry number, as follows: sheets, towels, and handkerchiefs, in the corner; pillow cases, in corner at open end; collars, on inside near center; shirts, on bands at back of neck; socks, on leg near top; other articles, where most practicable.

Accommodations for Cadets During Holidays

Cadets who cannot go to their homes during the Christmas and Easter holidays may stay in barracks or in the visiting teams' dormitory. No food will be served in the mess during holidays.

SUMMER SESSION

A summer session is conducted for students who wish to accelerate their work or make up conditions.

State appropriations are limited to the nine months term. The summer session must be self-supporting, and the same fees must be charged to both state and out-of-state students. Tuition fees are based on the number of credit hours taken by the student. Fees for the summer term are as follows:

Registration fee	$ 5.00
Tuition ($6.00 per credit hour).	
Board (Subject to change)	120.83
Room, lights, water and laundry	29.17
Hospital fee	5.00
Deposit for books	15.00
Activities fee	8.75

Employment

The time of a cadet at The Citadel is very largely taken up with his duties; hence there is no opportunity for employment either within the college or outside for the purpose of financial assistance.

Hospital

The hospital facilities at The Citadel are excellent, and all ordinary cases of sickness are treated by the surgeon and nurses of the college without expense to the parent. Surgical cases requiring the removal of a cadet to an infirmary in the city, services of a special nurse in the college hospital, and special treatment of eyes, ears, teeth, etc., must be at the expense of the parent or guardian.

SCHOLARSHIPS AND HONORS

Charleston City Scholarships

There are six scholarships maintained by the City of Charleston. Each of these is worth $250.00 a year. Appointments are made by the Committee on Ways and Means of the City Council on the basis of competitive examinations. Applicants must be residents of the City of Charleston.

Other Scholarships

The William States Lee Scholarship.—The income from $6,000.00 in bonds; founded in 1925 by the late William States Lee of Charlotte, N. C.

The James R. Crouch Scholarship.—The income from $5,000.00 in bonds; founded in 1925 by the late James R. Crouch of Greenville, S. C.

The First Field Artillery Brigade, A. E. F., Scholarship.—Covering all expenses at The Citadel for four years; established in 1934 by Colonel Robert R. McCormick of Chicago, Ill. Limited to candidates from the state of Illinois. Qualifications:

1. Financial need.
2. Superior scholastic record.
3. General worth and personality as indicated by qualities of manhood, truth, courage, devotion to duty, and unselfishness.
4. Exhibition of moral force of character and qualities of leadership.
5. Physical vigor as shown by participation in manly sports.

The Fifth Field Artillery Scholarship.—Covering all expenses at The Citadel for four years; established in 1934 by Colonel Robert R. McCormick of Chicago, Ill. Limited to candidates from the State of Illinois. The qualifications are the same as for the First Field Artillery Brigade Scholarship.

Augustus Horatio Jones Scholarship.—Established by Mrs. Frank G. Geary of New York in memory of the late Augustus Horatio Jones of Charleston, S. C. A four-year scholarship covering all college expenses. Limited to residents of the State of South Carolina.

The Anne Jones Geary Scholarship.—Established by Mrs. Frank G. Geary of New York, this scholarship covers all college expenses for four years. Limited to applicants from South Carolina.

Honors and Awards

The Scholarship Medal—presented annually by the Board of Visitors to the cadet graduating at the head of his class.

General High Honors—awarded to those cadets of the graduating class whose academic standing in each of the four college years does not fall below a grade point ratio of 2.67.

General Honors—awarded to those cadets of the graduating class who have maintained a grade point ratio of 2.50 to 2.66 during the four college years.

Departmental Honors—awarded on recommendation of heads of departments to those cadets of the graduating class who have established a grade point ratio of 2.50 or better in at least 54 quarter hours of work in a department, including all departmental work in the junior and senior years.

Citation for Excellence—those cadets who have made a grade of A in the year's work of any course are cited for excellence in that course.

The Gold Star—awarded to those cadets who have made a grade point ratio of not less than 2.67 in the work of a quarter. The star is worn on the collar of the uniform during the next quarter.

R. O. T. C. Honors—graduates whose proficiency in military training and intelligent attention to duty have merited the approbation of the Professor of Military Science and Tactics are designated "Honor R. O. T. C. Graduates." Only five per cent of the graduating class may be so designated; those in excess of this number meriting distinction are designated "Distinguished R. O. T. C. Graduates."

The John O. Willson Ring—the bequest of Dr. John O. Willson; given annually to the member of the first class voted by his classmates the manliest, purest, and most courteous member of his class.

The Algernon Sydney Sullivan Awards—bronze medallions presented by the college, through the benefaction of the New York Southern Society, to students or others in recognition of high thought and noble endeavor; established by that society in 1925, the awards have been made at The Citadel since 1933.

The Charles Cotesworth Pinckney Oratorical Award—established by Colonel Clark Williams in honor of the young patriot whose eloquence influenced the Constitutional Convention. The award consisting of a watch of the value of $50.00 is presented annually to that cadet who during the year has shown the greatest proficiency in public speaking and debate.

The Star of the West Medal—originally presented to The Citadel by Dr. B. H. Teague; awarded annually for one year to the best drilled cadet.

The W. C. White Medal—presented annually by Mrs. W. C. White to the captain of the best drilled company.

The Commandant's Cup—presented to The Citadel by the late Lieutenant Colonel W. C. Miller; awarded annually for one year to the best drilled company.

The competitions for the Star of the West Medal, the W. C. White Medal, and the Commandant's Cup are held as a part of the annual commencement exercises.

The 103rd Field Artillery Award—established by the veteran organization of that regiment as a trophy to be won each year by the company of cadets which has attained the best record in discipline.

The Washington Light Infantry Marksmanship Trophy and Medals—a trophy awarded annually for one year to the organization whose team makes the highest score in small-bore rifle marksmanship; silver medals awarded to the members of the winning team; and a gold medal to the cadet making the highest individual score; all presented by the Washington Light Infantry.

The Coast Artillery Association Medal—awarded by the Coast Artillery Association to the outstanding Coast Artillery R. O. T. C. enrollee of the second class.

The American Legion Saber—presented to The Citadel by Charleston Post No. 10, American Legion, is awarded to the member of the first class who writes the best article on an appropriate military subject.

The William Moultrie Award—awarded annually by the South Carolina Chapter, D. A. R., to the member of the first class judged to have shown to the greatest degree qualities of leadership, military proficiency, and soldierly deportment.

The Wade Hampton Saber—awarded annually by the South Carolina Division, U. D. C., to the member of the first class who has attained the highest standing in Military Science and Tactics.

The Charleston Chapter of the Reserve Officers' Association Saber—awarded annually by The Charleston Chapter of the Reserve Officers' Association to the Senior R.O.T.C. cadet, graduating from The Citadel each June, who submits the winning essay entitled *Why I Should Be a Reserve Officer*. The saber will be named to honor the memory of some reserve officer who has been killed in defense of the United States.

The Robert Lee Bass Award—established in memory of Robert Lee Bass of Hemingway, S. C. Awarded annually to that member of the fourth class who has the highest standing in conduct at the end of the year.

GENERAL INFORMATION

Educational Standing

The Citadel is a fully accredited senior college. It is a member of the Southern Association of Colleges and Secondary Schools and is on the approved list of the Association of American Universities.

The Civil Engineering Department is accredited by the Engineers' Council for Professional Development.

System of Management

The Citadel is essentially a military college. Leadership, initiative, and character are developed by placing upon cadets the great responsibility of controlling all units in the military organization.

All the cadets live in barracks. From reveille to taps, every hour of the cadet's time is accounted for. The regular habits of study and living thus formed, the attention to duty, obedience to authority, and love of order inculcated are considered among the most valuable features of the military education. While few of the graduates enter the military profession, hundreds in all walks of civil life attest to the high value of the training received at the institution.

The daily routine is regulated by the "Cadet Regulations", generally known as the "Blue Book." A copy of this manual will be furnished to parents or guardians upon request.

Reserve Officers' Training Corps

The Citadel is justly proud of the record of its R. O. T. C. For more than eleven years it has been rated "Excellent", a rating based on an annual inspection by the War Department. This is the highest rating given to any unit.

The course of study in Military Science and Tactics is that prescribed by the War Department for students enrolled in the R. O. T. C.

U. S. Military and Naval Academies

Since The Citadel is not a preparatory school, it has no courses specifically designed to prepare students to enter the national military and naval schools at West Point and Annapolis. The regulations for admission to these institutions provide for the acceptance of work done in certain accredited colleges, of which The Citadel is one, in lieu of the usual mental examination. Many Citadel cadets have entered both West Point and Annapolis by certificate under these regulations.

Cadets who are planning to enter the United States Naval Academy are advised to substitute physics for chemistry in their freshman year at The Citadel.

Physical Examination

All new cadets are given a physical examination at the opening of college as a part of the registration procedure. However, in order to avoid loss of time on account of defects thus disclosed after reporting for duty, applicants who have been accepted for admission are urged to have a thorough physical examination before leaving home. Particular attention should be given to tonsils, eyes, ears, nose, and throat.

Furloughs

A suspension of work for ten days, including Christmas Day and New Year's Day, is required by law.

The Corps of Cadets is furloughed from the end of the spring quarter until the opening of college in September.

By applying for permission for their sons' entry to The Citadel parents voluntarily relinquish control over them to the authorities of the college, and it is expected that they will not ask for furloughs for their sons except in extreme cases. In every case the reason for furlough should be stated and the decision left to The Citadel authorities whether the circumstances warrant the approval of the application. This must be done before furloughs will be approved.

It is not the policy of The Citadel to grant discharges between the completion of examinations and the Commencement exercises or the beginning of a furlough. Cadets may withdraw at such times only by order of the Chairman of the Board of Visitors or the President.

The following paragraphs are sections from the handbook "Cadet Regulations":

25.04. Special Leave. a. Special leave may be granted upon the request of the parent or guardian in the event of the marriage of a member of the cadet's immediate family, or a golden wedding anniversary in the cadet's family. The immediate family includes parents, grandparents, brothers, sisters and the permanent resident members of the family.

b. Special leave may be granted under exceptional circumstances clearly stated by the parent showing the necessity for such leave. In all cases the final decision must rest with the authorities of the college.

25.05. Emergency Leave. An emergency leave for five (5) days subject to extension, if necessary, will be granted to a cadet upon the receipt by the Commandant of Cadets or the Officer in Charge of a letter or telegram containing news of the death or critical illness of a

Military training is continuous from day to day and the Military grade awarded a cadet is a combination of his practical and theoretical work

member of the cadet's immediate family. If any other emergency arises in a cadet's home requiring the cadet's presence the facts should be set forth clearly by the parent or guardian in a written communication making request for leave. Decision as to whether or not leave will be granted must be left to the authorities of the college. In cases of emergency the cadet need not make application for leave. A special order for emergency leave will be issued upon the request of the parent or guardian only and the cadet will be released to take the first available transportation to his home.

40.07. MEDICAL SERVICE. Except in emergency occurring on leave and requiring immediate medical attention, a cadet will not arrange for or receive professional treatment from doctors or specialists without permission from the Surgeon. Applications for any special leaves required for such treatment will be submitted to the Commandant and referred to the Surgeon.

40.08. SPECIAL MEDICAL AND DENTAL SERVICES. Dental work, special examination of eyes, etc., should be looked after during the summer or the Christmas furlough. Leaves should not be requested for this purpose. In cases of emergency there are competent specialists and ample facilities in Charleston for taking care of any needs of cadets. In matters of health, the regular Surgeon of the college will advise the proper course to be taken. In case the services of local dentist, oculist or other specialist are deemed necessary, the request therefor will be submitted to the Commandant of Cadets and by him referred to the Surgeon, who, if he approves the request, will make all necessary appointments for the cadets, and return the application to the Commandant for final action.

Hazing

The practice of hazing is becoming less and less common in our colleges. It is a practice which should be totally abolished, because, if countenanced at all, it almost invariably is carried to excess by a few irresponsible students.

At The Citadel, where all the cadets live together in barracks, the presence of individuals who are obsessed with the idea that beatings and indignities are a part of a student's education cannot be tolerated; and no student is wanted in the corps who does not subscribe voluntarily to the regulations which absolutely bar hazing from the corps.

The regulations concerning hazing are contained in the following resolutions of the Board of Visitors:

Whereas, The Statutes of the State make it unlawful for any student to engage in hazing (XXVIII, Statutes at Large, page 619), and

Whereas, This Act requires the governing board of all colleges supported in whole or in part by the State to formulate and issue such regulations as may be necessary to enforce this law,

Therefore, be it resolved, That the Board of Visitors of The Citadel, in compliance with the law cited, hereby adopts the following regulations:

1. Every cadet will be required to subscribe to the following promise:

I (Name of cadet) hereby promise that I will not engage in hazing in any form during my connection with The Citadel.

(Signature of Cadet)

2. In any apparent case of hazing, where the facts do not come directly under the observation of the authorities, the Commandant of Cadets will require each cadet in the corps to make a statement whether he was involved in the case, and if so, the facts relating to his connection therewith. In every case where a cadet is guilty of hazing, he shall immediately withdraw from The Citadel, and the facts in the case together with the statement of the cadet will be forwarded to the Board of Visitors.

3. The acceptance of these regulations by the parents or guardian of each cadet and also by the cadet himself will be required before such cadet will be admitted to the college.

4. Hazing is defined to be striking, laying hands upon, treating with violence, or offering bodily harm to a cadet who has been connected with the college for less than one year, or other treatment of a harassing, tyrannical, abusive, insulting, or humiliating nature, or that may endanger the physical well-being of such cadets.

Requiring a fourth classman to perform any personal service whatever for a member of the higher classes constitutes hazing.

Customs and Courtesies

Customs and Courtesies, a twenty-nine-page booklet published at The Citadel, is designed to provide cadets with a compact manual of good deportment. This manual is used as the textbook in a course in deportment given by the Department of Military Science and Tactics.

After explaining clearly the value of a knowledge of the correct way of conducting oneself in social contacts the booklet presents detailed information on such matters as personal appearance and dress, correct speech, table manners, introductions, calling cards, calling, social correspondence, overnight visits, and punctuality.

The practical value of the booklet is evidenced by the fact that many persons not connected with the college have requested copies.

Religious Influences

The Citadel is non-sectarian, but its high objectives cannot be achieved unless its educational program is founded on a solid religious life. Divorced from the spiritual aspirations of the individual and of the group, education is likely to destroy greater values than it creates. The basic purpose of education is to integrate its curricula with character-building activities and a normal religious life to the end that young people may be not only more efficient but better motivated by a sense of duty and obligation. Thus, in an atmosphere of tolerance and mutual respect, every cadet is encouraged to maintain his ties with the religious group to which he belongs, and the college attempts to provide the means by which such association may be made most fruitful.

It is significant that the college in planning its present building program thought first of a cadet chapel which in size, dignity, and beauty would be a fitting reminder to all cadets that education must be founded upon spiritual strength. This great building, always accessible, imposing and churchly, is dedicated to no denomination or creed, but is a shrine of religion, of patriotism, and of remembrance in which any group of good will and seemly purpose may hold services and feel at home in doing so.

Within its walls ministers of many denominations take turns in conducting the regular nine o'clock service held every Sunday morning, which is attended by all cadets except Roman Catholics and Jews. Early every Sunday morning there is a low celebration of the Holy Communion for Episcopalians, followed by a low mass for Roman Catholics. At regular intervals—monthly, bi-monthly, or quarterly, as is usual with the denomination—communion services are held for each of several Protestant groups directly following the nine o'clock service. Jews attend religious instruction under a local rabbi in a room set aside for the purpose in the Cadet Activities Building. The local Episcopal, Methodist, and Roman Catholic bishops provide chaplains for cadets of their communions, and leading ministers of other sects act as spiritual advisers to cadets of their groups.

Special services are held for Episcopalians on Ash Wednesday and Good Friday, and special early masses on holy days of obligation for Roman Catholics. During the Advent season, and shortly before the beginning of the Christmas furlough, a great carol service is held, participated in by representatives of Charleston choirs and by Anglican, Protestant, and Roman Catholic clergymen. Annually, parallel religious emphasis week programs are conducted under three auspices—those of the Y.M.C.A. for Protestant cadets, the Newman Club for Roman Catholics, and the Jewish Club for members of that faith. These programs, led by outstanding speakers, are intended to bring into clearer relief a sense of the dignity and manliness of the religious life.

INTERIOR OF CADET CHAPEL

In all of the services thus conducted and in the other influences which the college brings to bear on its cadets, it is sought to avoid the casual and the perfunctory. Cadets are encouraged to regard contacts with their churches as vital to their education and development, and the act of worship as a deeply significant experience that should be accompanied by dignity, reverence, and gratitude. Thus, on Sunday mornings one may view the impressive ceremony of battalions of cadets, each marching from its respective barracks across the drill field and converging on the chapel, and will sense no evidence of mere routine in their attitude. On the contrary, in this reassuring spectacle and in the service that follows, there is a fine manifestation of respect and reverence for this hour as the most significant of the entire week. The college realizes that these services, and the underlying religious life of which they are the outward manifestation, must be more than a mere gesture. Otherwise young men will find, as their intellectual horizons widen and they come into possession of the uncertain techniques of lay learning, that there is a temptation to abandon religious teaching as a guide and to substitute "reason" for faith as the ultimate guide. From this peril education must protect itself by constantly reminding young people that education builds and enriches life not by abandoning religious faith as outmoded, but by accepting it as the source of truth and understanding.

The inscription on the front of the chapel is, "Remember now thy Creator in the days of thy youth."

Y. M. C. A.

The Citadel Y. M. C. A., organized in 1886, is an important part of the religious and social life of the cadets. The work is supervised by a student committee, a cabinet, and a full-time executive secretary.

The regular weekly meetings feature addresses by prominent clergymen and secular leaders of Charleston. In addition, the organization is frequently addressed by prominent visiting speakers sponsored by the city Y. M. C. A.

Services of a leader in the field of religious education are engaged for a week during the college year, which is known as Religious Emphasis Week. Daily meetings are held and an opportunity is afforded the cadets for personal conferences with the leader.

To the Association are also entrusted the upkeep of recreation rooms, the maintenance of telephone service, and the publication of a handbook.

A sub-station of the United States Post Office is operated at The Citadel under the direction of the Y. M. C. A. Secretary.

Religious Groups

For Episcopal cadets there is a student parish, "St. Alban's at The Citadel," for Roman Catholic cadets the Citadel Newman Club, and for each other group an appropriate club; these meet on Monday evenings for instruction by the chaplain or spiritual adviser, and to plan social functions in co-operation with civilian young people's groups of similar churches in Charleston. At the 9 o'clock general service Sunday mornings there is a de-emphasis on doctrine; on Monday evenings doctrinal training is paramount, so that cadets may leave The Citadel stronger in their faith than before they entered.

Clubs and Fraternities

It is not considered in keeping with the democratic ideals of The Citadel to encourage the formation of exclusive societies or fraternities, membership in which is based on other requirements than individual worth and achievement. When new cadets report to the college, all are at once put in uniform and, as far as possible, all artificial distinctions based on wealth, position, or influence are minimized and the cadet encouraged to achieve his place by individual merit. All cadets live under practically identical conditions and all are rated by the same standards, but there is a wide range of opportunity for each to develop in accordance with his needs and aptitudes. Elsewhere in this booklet are described the various clubs, organizations, and activities that are open to all cadets.

Music

In addition to The Citadel band, which constitutes one of the drill and administrative units into which the corps of cadets is organized, the college affords several excellent ways in which cadets may develop their musical interests.

Through the Carnegie Corporation the college has acquired a very valuable music set consisting of an electric phonograph, nearly seven hundred records, and various books dealing with musicians and musical appreciation.

The cadet orchestra, the "Bull Dogs", plays for the informal dances and at other campus functions. The cadet choir, the music club, and the glee club are also important parts of college life.

Library

The college library is located on the third floor of Bond Hall in a position of maximum accessibility to all academic departments. The library space, now ample to take care of over twenty per cent of the

normal student body, was approximately doubled at the beginning of the academic year 1939-40 by the addition of a large, handsomely finished and equipped reading room covering the entire third floor of the new extension to Bond Hall. This room has a gallery running around three sides with book stacks arranged to form alcoves. The main floor and the alcoves are equipped with special library tables and I. E. S. lamps. The entire room is most attractively appointed and admirably suited to its purpose.

The original reading room, stack rooms, and offices of the old library are immediately adjacent to the new and connected with it by corridor.

The collection of books now contains approximately 42,000 volumes and is being increased at the rate of over 2,000 volumes per annum. Important additions have been made possible by gifts from friends of the college.

In addition to the general collection there are separate departmental libraries housed in the departments of Chemistry, Physics, and Civil Engineering. All of these volumes are listed in the catalogue of the college library.

The reading rooms are well supplied with catalogues and indexes, current magazines and newspapers, technical and scientific journals, and literary and critical reviews.

Placement Committee

A faculty-staff group known as the Placement Committee assists graduates and members of graduating classes to secure positions. No charge is made for this service, but registration with the committee and submission of necessary data for preparation of case histories are prerequisites for this aid.

Summer Session

The summer term of twelve weeks affords an opportunity to students, both cadets and veterans, to shorten the time required for graduation and also gives students an opportunity to remove conditions. In general, the courses provided are a continuation of the courses offered during the regular session, and the student who attends the twelve-week summer term can gain a full quarter's credit.

Cadets will be under military discipline and college regulations.

For expenses see itemized list of fees on page 32 of the catalogue.

VETERANS

Under Public Law No. 346, known as the Servicemen's Readjustment Act of 1944, any veteran of World War II is entitled to education or training for a period of one year in an approved educational or training institution provided he has been honorably discharged from the service. Satisfactory completion of the first year of study shall entitle the veteran to an additional period or periods of education, not to exceed the time he was in the active service on or after September 16, 1940, and before the expiration of the war, with a maximum period of four years altogether. Determination of eligibility for such education or training rests with the Veterans Administration, and the veteran who wishes to take advantage of the provisions of this Act should secure from the Veterans Administration a certificate of eligibility. He may attend any approved educational or training institution which he chooses to enroll in, but the course of study must be initiated within two years following his discharge or from the date of the termination of the war, whichever is the later.

This law is designed for those whose education was impeded, delayed, interrupted, or interfered with by reason of entrance into the service, and it is assumed that all persons who were not over 25 years of age at the time they entered the service have had their training interrupted. A person over 25 years of age when he entered active service must submit satisfactory evidence that his education or training was impeded, delayed, interrupted, or interfered with.

To be eligible for training under Public Law 16 the veteran must have a vocational handicap resulting from disability incurred in or aggravated by service after December 6, 1941. If an educational course is deemed necessary, the Veterans Administration provides advisory service and makes all arrangements with the school or college the veteran is to attend.

Opportunities at The Citadel

It is the desire of The Citadel to co-operate helpfully with veterans to assure them the maximum educational benefits guaranteed them by the two enactments referred to above. All of the services and facilities of the college will be open to veterans on the same basis as for other students.

Veterans who entered the service prior to May 1, 1947, may enroll either with status of cadets or as civilian students. Those with subsequent service record must enroll as cadets.

Army Regulations provide that veterans with service of twelve months or more are entitled to credit for the entire basic course of the Senior

Division, R.O.T.C. Credit for the first year basic course may be given for six months' service.

In accordance with the above, those veteran students who have less than six months' service must matriculate as cadets. Those with more than six months' service but less than twelve months' service will be required to enroll as cadets at the beginning of the third class (sophomore) year. Those with more than one year and less than two years of service, if physically fit, unmarried, and under 26 years of age, will be required to enter the cadet corps at the beginning of the second class (junior) year.

In accordance with the policy adopted by the college, veterans who hold commissions in the Officers' Reserve Corps or who had active duty of two years or more with the Army, Navy, Coast Guard or Marine Corps, prior to August 26, 1945, will be graduated without further military training.

Expenses

The federal government through the Veterans Administration will pay the cost of tuition and all regular college fees. To defray the cost of room and board the veteran will receive a subsistence allowance under Public Law No. 346 of $65.00 a month if without dependents, or $90.00 per month if he has a dependent or dependents. This allowance is adequate to meet the cost of room and board of veteran students who live on the campus and have all of their meals in the mess hall.

The cost of maintenance for the college year of nine months is as follows:

Board	$ 362.50
Room, heat, lights and laundry	87.50
	$450.00

The amount charged for board is subject to change.

DEPARTMENTS OF INSTRUCTION

The Objectives of The Citadel

The objectives of The Military College of South Carolina are to offer such courses in the liberal arts and sciences as will develop the mind and character of the student, increase his likelihood of success in any useful pursuit, and fit him to discharge the duties of citizenship; to give to students who so desire professional training in Civil Engineering, Electrical Engineering, and Business Administration; to see that its graduates are adequately equipped in their respective fields of concentration to enter in full standing post-graduate, professional, or technical schools; and to qualify them for commissions in the Officers' Reserve Corps, United States Army.

Courses

The course of study is essentially the same for all freshmen. Certain subjects are required in the sophomore year of all students, the remaining subjects being determined by the course which the student is to follow during his junior and senior years. Major work is offered in the following departments: Business Administration, Chemistry, Civil Engineering, Electrical Engineering, English, History, Mathematics, Modern Languages, Physics, and Political Science. A thorough pre-medical course is also offered.

A statement of the courses required each year in each department and a detailed description of the various courses will be found in the pages immediately following.

Grades

A, B, C and D are passing grades. F represents failure. I represents work of a satisfactory character incomplete for acceptable reasons.

For determining class standing and graduation a quality point system is employed. Grades in this connection have the following values: "A" carries three points for each quarter hour credit; "B", two points; "C" one point; "D", no quality points.

A subject dropped after the middle of the quarter will receive a grade of F.

Reports on the standing of cadets are mailed to parents or guardians at the end of each quarter.

Promotion

No student will be promoted from the fourth to the third class who has a grade of F in more than one subject.

For advancement from the third to the second class a student must have a grade point ratio of 0.70 or better in the courses of the fourth and third classes combined.

For promotion to the first class a student must be able to graduate within three quarters from the date of promotion.

The grade point ratio is determined by dividing the total number of quality points by the total credit for work taken.

N. B.—There is so wide a degree of variation in the preparation and abilities of students when they enter college that inevitably not all will be able to complete The Citadel's requirements for graduation in four years. In every worthy case, parents are urged to accept the necessity of their son's returning to college for an additional year without any sense of stigma.

Requirements for Graduation

For graduation it is required that one of the programs of study as outlined on pages 49 to 59 be completed with an accumulated grade point ratio of 0.80 or more. In no case shall the minimum of total quarter credit hours be less than 210 nor the period of attendance at the college less than two years.

Every cadet is required to complete a course in the Constitution of the United States or the course in Government as given in the sophomore year. Exception is made in the case of cadets who present credit for a study of the Federal Constitution in high school.

It is also a requisite for graduation that every senior prepare at term paper on a subject chosen from his field of concentration. This subject will be chosen in consultation with the department head concerned prior to the end of the first quarter.

In addition to the formal credits required for graduation, the candidate must have demonstrated that he is of high character and worthy to receive the diploma of the college. Recommendations for graduation are made by the Academic Board to the Board of Visitors, who in turn award the diplomas.

Degrees

The degree of Bachelor of Arts is conferred upon satisfactory completion of the English, History, Modern Language, Political Science, and classical programs of study. The degree of Bachelor of Science is conferred upon satisfactory completion of the Chemistry, Mathematics, Physics, and Pre-Medical programs.

The degree of Bachelor of Science in Commerce is awarded to students who complete satisfactorily the course in Business Administration.

Graduates in Civil Engineering receive the degree of Bachelor of Science in Civil Engineering. Graduates in Electrical Engineering receive the degree of Bachelor of Science in Electrical Engineering.

The degree of Civil Engineer is conferred as a professional degree upon graduates in civil engineering after at least three years of responsible work in their profession and the submission of a satisfactory thesis on some engineering subject.

Classification of Cadets

The cadets are arranged in four distinct classes, corresponding with the four years of study. Cadets pursuing the first year's course constitute the Fourth or Freshman Class; those taking the second year's course, the Third or Sophomore Class; those in the third year's course, the Second or Junior Class; and those in the fourth year's course, the First or Senior Class.

Courses of Study

In the following pages will be found a detailed schedule of the curriculum required for each degree according to the major subject elected. The clock hours and the credit value of each course are noted. The individual courses are described under the appropriate departmental heading in the pages following the schedules.

The Biology and Geology courses are given in the Department of Chemistry; the Drawing, in the Department of Civil Engineering; the Psychology, Philosophy, and Classical Languages, in the Department of Education.

The courses of the fourth class are numbered from 101 upward, of the third class from 201 upward, of the second class from 301 upward, and of the first class from 401 upward. The letters a, b, c after the course number indicate the quarter in which the course is given, a being for the first quarter, b for the second, and c for the third. Courses that run through the year are listed by number only.

COURSES OF STUDY

Business Administration Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Lab.	Qr. Hrs. Credits	Total
URTH CLASS						
ege Algebra	Math. 102 ab	24	3	0	6	
gonometry	Math. 103c	12	3	0	3	
nposition and Introduction to Literature	Eng. 101	36	3	0	9	
opean Civilization since 1500	Hist. 101	36	3	0	9	
eral Inorganic Chemistry	Chem. 101	36	3	2	12	
Modern Language		36	3	0	9	
Year Basic Military Science	Mil. Sc. 101	36	2	1	4	52
IRD CLASS						
vey of English Literature	Eng. 201	36	3	0	9	
oduction to College Physics	Phys. 201	36	3	2	12	
nomic Principles	B. Ad. 201	36	3	0	9	
y Material Wealth	B. Ad. 203	12	5	0	5	
iness Psychology	B. Ad. 204	12	5	0	5	
iness Statistics	B. Ad. 206	12	5	0	5	
Modern Language		36	3	0	9	
Year Basic Military Science	Mil. Sc. 201	36	2	1	4	58
COND CLASS						
ounting Principles	B. Ad. 303	24	3	3	9	
iness Law	B. Ad. 305	12	5	0	5	
iness Organization	B. Ad. 306	12	5	0	5	
ciples of Labor	B. Ad. 307	12	5	0	5	
eral Insurance	B. Ad. 308	12	5	0	5	
keting	B. Ad. 309	12	5	0	5	
eign Trade	B. Ad. 310	12	5	0	5	
ernment Finance	B. Ad. 311	12	5	0	5	
ation	B. Ad. 312	12	5	0	5	
Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	57
ST CLASS						
ounting Theory and Practice	B. Ad. 401	24	3	3	9	
poration Finance	B. Ad. 403	12	5	0	5	
estments	B. Ad. 404	12	5	0	5	
es Administration	B. Ad. 405	12	5	0	5	
nsportation	B. Ad. 406	12	5	0	5	
ney	B. Ad. 407	12	5	0	5	
king	B. Ad. 408	12	5	0	5	
duction	B. Ad. 409	12	5	0	5	
sonnel Management	B. Ad. 410	12	5	0	5	
Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	57
			Total			224

Chemistry Major

Subject	*Courses*	*No. of Weeks*	*Clock Hrs. per week Rec.*	*Lab.*	*Qr. Hrs. Credits*	*To*
FOURTH CLASS						
College Algebra	Math. 111a	12	5	0	5	
Trigonometry	Math. 112b	12	5	0	5	
Analytic Geometry	Math. 113c	12	5	0	5	
Composition and Introduction to Literature	Eng. 101	36	3	0	9	
European Civilization since 1500	Hist. 101	36	3	0	9	
General Inorganic Chemistry	Chem. 101	36	3	2	12	
Elementary German	Ger. 101	36	3	0	9	
1st Year Basic Military Science	Mil. Sc. 101	36	2	1	4	
THIRD CLASS						
Survey of English Literature	Eng. 201	36	3	0	9	
Introduction to College Physics	Phys. 201	36	3	2	12	
Chemical Analysis, Qualitative	Chem. 201	36	2	3	9	
Calculus	Math. 201	36	5	0	15	
Scientific German	Ger. 201	36	3	0	9	
2nd Year Basic Military Science	Mil. Sc. 201	36	2	1	4	
SECOND CLASS						
Volumetric Chemical Analysis	Chem. 301ab	24	2	4	8	
Gravimetric Chemical Analysis	Chem. 301c	12	2	4	4	
Organic Chemistry	Chem. 303	36	3	3	12	
Electives (three)		36	3	0	27	
1st Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	5
FIRST CLASS						
Chemistry—Physical	Chem. 401	36	3	3	12	
Chemistry—Organic Preparations	Chem. 403a	12	1	4	3	
Chemistry—Advanced Topics in Organic	Chem. 404bc	24	3	0	6	
Chemistry—Advanced Quantitative	Chem. 407ab	24	2	4	8	
Chemistry—Qualitative Organic	Chem. 408c	12	2	4	4	
Elective		36	3	0	9	
2nd Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	5
			Total			22

Civil Engineering

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Clock Hrs. per week Lab.	Qr. Hrs. Credits	Total
URTH CLASS						
llege Algebra	Math 111a	12	5	0	5	
gonometry	Math. 112b	12	5	0	5	
alytic Geometry	Math. 113c	12	5	0	5	
mposition and Introduction to Literature	Eng. 101	36	3	0	9	
ropean Civilization since 1500	Hist. 101	36	3	0	9	
neral Inorganic Chemistry	Chem. 101	36	3	2	12	
gineering Drawing	C. E. 101	36	1	3	9	
Year Basic Military Science	Mil. Sc. 101	36	2	1	4	58
IRD CLASS						
rvey of English Literature	Eng. 201	36	3	0	9	
roduction to College Physics	Phys. 201	36	3	2	12	
culus	Math. 201	36	5	0	15	
rveying	C. E. 205	36	3	2	12	
gineering Drawing	C. E. 203	36	0	4	6	
scriptive Geometry	C. E. 201a	12	0	2	1	
aphic Statics	C. E. 202bc	24	0	2	2	
l Year Basic Military Science	Mil. Sc. 201	36	2	1	4	61
COND CLASS						
id Analytic Geometry and Intermediate Calculus	Math. 301a	12	3	0	3	
ferential Equations	Math. 302bc	24	3	0	6	
alytic Mechanics	C. E. 301	36	3	0	9	
ghway Engineering	C. E. 305	36	3	0	9	
gineering Law and Specifications	C. E. 309	36	3	0	9	
gineering Geology	Geol. 303a	12	3	2	4	
chanics of Materials	C. E. 303bc	24	3	0	6	
gineering Laboratory	C. E. 307ab	24	0	4	4	
ess Analysis	C. E. 308c	12	2	2	3	
Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	61
RST CLASS						
inforced Concrete	C. E. 403	36	3	0	9	
uctural Steel	C. E. 405	36	2	3	12	
ctrical Engineering	E. E. 411	36	2	2	9	
draulics	C. E. 407ab	24	3	0	6	
draulics Laboratory	C. E. 408c	12	0	2	1	
itation and Water Supply	C. E. 409ab	24	3	0	6	
l Mechanics and Foundations	C. E. 410bc	24	3	0	6	
terials Laboratory	C. E. 401a	12	0	4	2	
phalt and Soils Laboratory	C. E. 401c	12	0	4	2	
d Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	61
rm Paper	C. E. 411					
				Total		241

Electrical Engineering

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Clock Hrs. per week Lab.	Qr. Hrs. Credits	To
FOURTH CLASS						
College Algebra	Math. 111a	12	5	0	5	
Trigonometry	Math. 112b	12	5	0	5	
Analytic Geometry	Math. 113c	12	5	0	5	
Composition and Introduction to Literature	Eng. 101	36	3	0	9	
European Civilization since 1500	Hist. 101	36	3	0	9	
General Inorganic Chemistry	Chem. 101	36	3	2	12	
Engineering Drawing	C. E. 101	36	1	3	9	
1st Year Basic Military Science	Mil. Sc. 101	36	2	1	4	5
THIRD CLASS						
Survey of English Literature	Eng. 201	36	3	0	9	
Introduction to College Physics	Phys. 201	36	3	2	12	
Surveying	C. E. 205	36	3	2	12	
Calculus	Math. 201	36	5	0	15	
Engineering Drawing	C. E. 203ab	24	0	4	4	
Descriptive Geometry and Graphic Statics	C. E. 201a C. E. 201bc	12 24	0 0	2 2	1 2	
2nd Year Basic Military Science	Mil. Sc. 201	36	2	1	4	5
SECOND CLASS						
Solid Analytic Geometry and Intermediate Calculus	Math. 301a	12	3	0	3	
Differential Equations	Math. 302bc	24	3	0	6	
Analytic Mechanics	C. E. 301	36	3	0	9	
Engineering Law and Specifications	C. E. 309	36	3	0	9	
D. C. Circuits and Machines	E. E. 302	18	3	0	9	
A. C. Circuits and Machines	E. E. 401	18	3	0		
D. C. Machines Laboratory	E. E. 304	18	0	6	9	
A. C. Machines Laboratory	E. E. 403	18	0	6		
Advanced General Physics	Phys. 301	36	3	0	9	
1st Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	6
FIRST CLASS						
Electronics	E. E. 405, 402	36	3	0	9	
Electronics Laboratory	E. E. 407, 404	36	0	4	6	
Electrical Measurements	E. E. 301a	12	5	0	5	
Transmission Lines	E. E. 408b	12	5	0	5	
Power Plant Engineering	E. E. 413c	12	5	0	5	
Public Speaking	Eng. 205	12	5	0	5	
Heat Engines	E. E. 305c	12	5	0	5	
A. C. Theory	E. E. 406a	12	5	0	5	
Electrical Meas. Laboratory	E. E. 303a	12	0	4	2	
Senior Essay	E. E. 414bc	24	0	4	4	
2nd Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	5
				Total		23

English Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Clock Hrs. per week Lab.	Qr. Hrs. Credits	Total
URTH CLASS						
llege Algebra	Math. 102ab	24	3	0	6	
gonometry	Math. 103c	12	3	0	3	
mposition and Introduction to Literature	Eng. 101	36	3	0	9	
ropean Civilization since 1500	Hist. 101	36	3	0	9	
neral Inorganic Chemistry	Chem. 101	36	3	2	12	
reign Language		36	3	0	9	
Year Basic Military Science	Mil. Sc. 101	36	2	1	4	52
IIRD CLASS						
rvey of English Literature	Eng. 201	36	3	0	9	
roduction to College Physics	Phys. 201	36	3	2	12	
rvey of American History	Hist. 201	36	3	0	9	
e English Language	Eng. 203	36	3	0	9	
reign Language		36	3	0	9	
d Year Basic Military Science	Mil. Sc. 201	36	2	1	4	52
COND CLASS						
glish course*		36	3	0	9	
glish course*		36	3	0	9	
ective		36	3	0	9	
ective		36	3	0	9	
ective		36	3	0	9	
Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	53
RST CLASS						
glish course*		36	3	0	9	
glish course*		36	3	0	9	
ective		36	3	0	9	
ective		36	3	0	9	
ective		36	3	0	9	
l Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	53
			Total			210

* Other than 205abc, 315abc, or 405abc. For details see account of departmental offerings, es 86-91.

History Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Lab.	Cr. Hrs. Credits	To
FOURTH CLASS						
College Algebra	Math. 102ab	24	3	0	6	
Trigonometry	Math. 103c	12	3	0	3	
Composition and Introduction to Literature	Eng. 101	36	3	0	9	
European Civilization since 1500	Hist. 101	36	3	0	9	
General Inorganic Chemistry	Chem. 101	36	3	2	12	
A Modern Language		36	3	0	9	
1st Year Basic Military Science	Mil. Sc. 101	36	2	1	4	
THIRD CLASS						
Survey of English Literature	Eng. 201	36	3	0	9	
Introduction to College Physics	Phys. 201	36	3	2	12	
Survey of American History	Hist. 201	36	3	0	9	
American Government	Pol. Sc. 201	36	3	0	9	
A Modern Language		36	3	0	9	
2nd Year Basic Military Science	Mil. Sc. 201	36	2	1	4	
SECOND CLASS						
History of England	Hist. 301	36	3	0	9	
U. S. since 1900 or Europe since 1870	Hist. 303(4)	36	3	0	9	
Economic Principles	B. Ad. 201	36	3	0	9	
Electives (two)		36	3	0	18	
1st Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	
FIRST CLASS						
Historical Method	Hist. 401bc	24	0	3	3	
American Diplomatic History or Latin American History	Hist. 402(4)ab	24	3	0	6	
American Civil War or French Revolution	Hist. 403(5)c	12	3	0	3	
Colonial America or the Middle Ages	Hist. 406(7)	36	3	0	9	
Comparative Government and International Relations	Pol. Sc. 403-5	36	3	0	9	
or						
The American Constitution	Pol. Sc. 401	36	3	0	9	
Electives (two)		36	3	0	18	
2nd Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	
			Total			21

Mathematics Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Clock Hrs. per week Lab.	Cr. Hrs. Credits	Total
URTH CLASS						
llege Algebra	Math. 111a	12	5	0	5	
gonometry	Math. 112b	12	5	0	5	
alytic Geometry	Math. 113c	12	5	0	5	
mposition and Introduction to Literature	Eng. 101	36	3	0	9	
ropean Civilization since 1500	Hist. 101	36	3	0	9	
neral Inorganic Chemistry	Chem. 101	36	3	2	12	
Modern Language		36	3	0	9	
Year Basic Military Science	Mil. Sc. 101	36	2	1	4	58
IRD CLASS						
rvey of English Literature	Eng. 201	36	3	0	9	
roduction to College Physics	Phys. 201	36	3	2	12	
culus	Math. 201	36	5	0	15	
Modern Language		36	3	0	9	
ctive		36	3	0	9	
l Year Basic Military Science	Mil. Sc. 201	36	2	1	4	58
CONDCLASS						
id Analytic Geometry and Intermediate Calculus	Math. 301a	12	3	0	3	
ferential Equations	Math. 302bc	24	3	0	6	
gher Mathematics	Math. 303-305	36	3	0	9	
vanced General Physics	Phys. 301	36	3	0	9	
ctives (two)		36	3	0	18	
Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	53
RST CLASS						
vanced Mathematics	Math. 401	36	3	0	9	
vanced Mathematics	Math. 403	36	3	0	9	
ctives (three)		36	3	0	27	
l Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	53
			Total			222

Modern Language Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Lab.	Cr. Hrs. Credits	T
FOURTH CLASS						
College Algebra	Math. 102ab	24	3	0	6	
Trigonometry	Math. 103c	12	3	0	3	
Composition and Introduction to Literature	Eng. 101	36	3	0	9	
European Civilization since 1500	Hist. 101	36	3	0	9	
General Inorganic Chemistry	Chem. 101	36	3	2	12	
A Modern Language		36	3	0	9	
1st Year Basic Military Science	Mil. Sc. 101	36	2	1	4	
THIRD CLASS						
Survey of English Literature	Eng. 201	36	3	0	9	
Introduction to College Physics	Phys. 201	36	3	2	12	
Survey of American History	Hist. 201	36	3	0	9	
French, Elementary or	Fr. 101	36	3	0	9	
Intermediate	Fr. 201	36	3	0		
Spanish or German		36	3	0	9	
2nd Year Basic Military Science	Mil. Sc. 201	36	2	1	4	
SECOND CLASS						
Intermediate French or	Fr. 201	36	3	0	9	
Survey of French Literature	Fr. 301	36	3	0		
Intermediate or Advanced Spanish or German		36	3	0	9	
French Composition and Conversation or	Fr. 401	36	3	0	9	
An additional course in Spanish or German		36	3	0		
Elective		36	3	0	9	
Elective		36	3	0	9	
1st Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	
FIRST CLASS						
An Advanced French Course		36	3	0	9	
German Literature, 19th Cent. or *Faust* or		36	3	0	9	
Spanish Literature of the Golden Age or	Span. 301	36	3	0		
Spanish American Literature	Span. 303	36	3	0		
Electives (three)		36	3	0	27	
2nd Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	
			Total			2

Physics Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Clock Hrs. per week Lab.	Qr. Hrs. Credits	Total
OURTH CLASS						
ollege Algebra	Math. 111a	12	5	0	5	
igonometry	Math. 112b	12	5	0	5	
nalytic Geometry	Math. 113c	12	5	0	5	
omposition and Introduction to Literature	Eng. 101	36	3	0	9	
uropean Civilization since 1500	Hist. 101	36	3	0	9	
eneral Inorganic Chemistry	Chem. 101	36	3	2	12	
Modern Language		36	3	0	9	
or						
ngineering Drawing	C. E. 101	36	1	3		
t Year Basic Military Science	Mil. Sc. 101	36	2	1	4	58
HIRD CLASS						
urvey of English Literature	Eng. 201	36	3	0	9	
troduction to College Physics	Phys. 201	36	3	2	12	
alculus	Math. 201	36	5	0	15	
ective		36	3	0	9	
ective		36	3	0	9	
d Year Basic Military Science	Mil. Sc. 201	36	2	1	4	58
ECOND CLASS						
olid Analytic Geometry and Intermediate Calculus	Math. 301a	12	3	0	3	
ifferential Equations	Math. 302bc	24	3	0	6	
dvanced General Physics	Phys. 301	36	3	0	9	
aboratory Physics	Phys. 303	36	0	6	9	
ective		36	3	0	9	
ective		36	3	0	9	
t Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	53
IRST CLASS						
dvanced Physics	Phys. 401	36	3	0	9	
dvanced Physics Laboratory	Phys. 403	36	0	6	9	
lectrical Engineering	E. E. 409	36	3	6	18	
ective		36	3	0	9	
d Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	53
			Total			222

Political Science Major

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Lab.	Cr. Hrs. Credits	To
FOURTH CLASS						
College Algebra	Math. 102ab	24	3	0	6	
Trigonometry	Math. 103c	12	3	0	3	
Composition and Introduction to Literature	Eng. 101	36	3	0	9	
European Civilization since 1500	Hist. 101	36	3	0	9	
General Inorganic Chemistry	Chem. 101	36	3	2	12	
A Modern Language		36	3	0	9	
1st Year Basic Military Science	Mil. Sc. 101	36	2	1	4	
THIRD CLASS						
Survey of English Literature	Eng. 201	36	3	0	9	
Introduction to College Physics	Phys. 201	36	3	2	12	
Survey of American History	Hist. 201	36	3	0	9	
American Government	Pol. Sc. 201	36	3	0	9	
A Modern Language		36	3	0	9	
2nd Year Basic Military Science	Mil. Sc. 201	36	2	1	4	
SECOND CLASS						
International Law	Pol. Sc. 303ab	24	3	0	6	
American Foreign Relations	Pol. Sc. 304c	12	3	0	3	
American Political Parties	Pol. Sc. 305a	12	3	0	3	
Public Administration	Pol. Sc. 306bc	24	3	0	6	
Economic Principles	B. Ad. 201	36	3	0	9	
Electives (two)		36	3	0	18	
1st Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	5
FIRST CLASS						
The American Constitution	Pol. Sc. 401	36	3	0	9	
Comparative Government	Pol. Sc. 403a	12	3	0	3	
International Relations	Pol. Sc. 405bc	24	3	0	6	
Political Theory	Pol. Sc. 407	36	3	0	9	
Electives (two)		36	3	0	18	
Senior Essay	Pol. Sc. 409bc	24	0	3	3	
2nd Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	5
			Total			21

Pre-Medical Course

Subject	Courses	No. of Weeks	Clock Hrs. per week Rec.	Clock Hrs. per week Lab.	Qr. Hrs. Credits	Total
URTH CLASS						
llege Algebra	Math. 102ab	24	3	0	6	
gonometry	Math. 103c	12	3	0	3	
mposition and Introduction to Literature	Eng. 101	36	3	0	9	
ropean Civilization since 1500	Hist. 101	36	3	0	9	
neral Inorganic Chemistry	Chem. 101	36	3	2	12	
nch or German		36	3	0	9	
Year Basic Military Science	Mil. Sc. 101	36	2	1	4	52
IRD CLASS						
rvey of English Literature	Eng. 201	36	3	0	9	
roduction to College Physics	Phys. 201	36	3	2	12	
emical Analysis, Qualitative	Chem. 201	36	2	3	9	
mentary Zoology	Biol. 201	36	2	4	12	
nch or German		36	3	0	9	
l Year Basic Military Science	Mil. Sc. 201	36	2	0	4	55
COND CLASS						
mparative Anatomy	Biol. 301	36	2	4	12	
ganic Chemistry	Chem. 303	36	3	3	12	
boratory Physics	Phys. 305	36	2	2	9	
ysiological Psychology	Psy. 301ab	24	3	0	6	
normal Psychology	Psy. 301c	12	3	0	3	
ctive		36	3	0	9	
Year Adv. Military Science	Mil. Sc. 301	36	5	0	8	59
RST CLASS						
bryology	Biol. 401ab	24	2	4	8	
emical Analysis, Quantitative	Chem. 301ab	24	2	4	8	
vanced Topics in Organic Chemistry	Chem. 404bc	24	3	0	6	
vanced Inorganic Chemistry	Chem. 405a	12	3	0	3	
ysical Chem. for Pre-Med. Students	Chem. 406bc	24	3	0	6	
ctives (two)		36	3	0	18	
l Year Adv. Military Science	Mil. Sc. 401	36	5	0	8	57
			Total			223

DEPARTMENT OF BUSINESS ADMINISTRATION

Modern business has become so large in the size of industrial units and so complex in organization that a mastery of its theory and practice can no longer be acquired through apprenticeship. Today no single industry or business can give so adequate a training to its beginners as can be obtained in the department of business administration of a good college. Such college training is now considered the best method of equipping a man for success as a business and economic leader.

The purpose of the Department of Business Administration is to prepare the student to take his place in a business enterprise with such general knowledge of business that he can forego many of the years of experience which would be required of an apprentice, and to prepare him to enter in full standing the graduate schools of business administration, to pursue further professional business studies, and to take his place in economic society as a professional man in other fields of endeavor with sufficient knowledge to make sound decisions on economic problems.

The courses described below are not all pure business courses; rather they are designed to offer instruction in subjects commonly given in schools of arts and science, in schools of social science, and in schools of business administration.

201. Economic Principles

Required of all sophomores taking the Business Administration Course.

The stages of economic development are studied and compared in order to give a better understanding of our present economic society. An analysis is made of the principles underlying our economic structure, including a study of the factors of production, forms of business organization, division of labor, personnel, and functional distribution of income and price determination. The course also includes a brief introduction to money, banking, and credit, foreign trade, public finance, labor problems, and economic reform.

203. Raw Material Wealth

Required of all sophomores taking the Business Administration Course.

A study of the geography and the economics of raw materials; the location, the quantity, the quality, the values before and after manufacturing; manufacturing processes; relative importance to economic society.

BOND HALL

204. Business Psychology

Required of all sophomores taking the Business Administration Course.

Applied psychology as an aid to the business executive; statistical measures as an aid to the psychologist; vocational psychology, hiring and promotion of the employee; the psychological factor in the business cycle. The psychology of granting credit, selling, advertising and market research.

206. Business Statistics

A study of the mathematical computations common in business practice: interest, discount, annuities, bonds, capitalized costs, and insurance; statistical methods and their application to business problems.

303. Accounting Principles

Required of all juniors taking the Business Administration Course.

A study of the fundamental theory and practice of accounting: recording and analyzing business transactions; preparation and analysis of accounting statements; problems of accounting for notes, bonds, installment sales, consignments, branches, partnerships, and corporations. Weekly laboratory problems.

305. Business Law

Required of all juniors taking the Business Administration Course.

A discussion of the law which relates to the business man: contracts, agency, negotiable instruments, business association, sales, bailments, security relations, real property, and the like. Discussion of court decisions in actual cases supplements the class work.

306. Business Organization

Required of all juniors taking the Business Administration Course.

The legal relations of a business unit; kind of organization best adapted to various sorts of business activity; internal organization for maximum efficiency.

307. Principles of Labor

Required of all juniors taking the Business Administration Course.

An analysis of the worker's position in modern industry and the effects of industrial production on the worker's social position, introducing problems of wages, hours, working conditions, child labor, industrial accidents, unemployment, trade unions and collective bargaining. Economic problems of the worker under current labor legislation are considered.

308. General Insurance

Required of all juniors taking the Business Administration Course.

A survey course in predictable business risks and the methods of minimizing these risks through insurance; intelligent planning of a program of insurance for personal needs and business responsibilities; contract forms, coverages, and rates of life, fire, casualty, and marine insurance, and fidelity and surety bonds.

309. Marketing

Required of all juniors taking the Business Administration Course.

The business activities necessary to effect the physical distribution of goods from the producer of the raw materials to the consumer; the marketing institutions; a study of the marketing functions and some marketing problems such as price policies and price maintenance, brands, marketing costs and efficiency.

310. Foreign Trade

Required of all juniors taking the Business Administration Course.

The channels of distribution for surplus goods which have to find their outlet in foreign countries; the theory of international trade; foreign trade promotion activities; the commercial organization and policies governing foreign trade practices; trade methods and problems; financial arrangements.

311. Government Finance

Required of all juniors taking the Business Administration Course.

A survey of the amount and purposes of governmental expenditures; scope of government financial activity; public budgets; principles of public borrowing; sources of revenue; theories of tax distribution; general principles and practices of the property tax, commodity taxes, corporation and other business taxes.

312. Taxation

Required of all juniors taking the Business Administration Course.

A study of the basic principles of income taxation, including a thorough analysis of the present Federal law dealing both with persons and corporations; a survey of social security taxes, death taxes and gift taxes.

401. Accounting Theory and Practice

Required of all seniors taking the Business Administration Course.

Advanced study of theory and practice of accounting: financial statements; valuation of business assets and liabilities; preparation of financial statements for special purposes such as statement of funds, statement of realization and liquidation, and statement of affairs; prep-

aration of consolidated statements; accounting for estates and receiverships. Weekly laboratory problems.

403. Corporation Finance

Required of all seniors taking the Business Administration Course.

The manager's problem in securing, disposing of, conserving and using the finances of his business; the legal and practical uses of bond, stock, circulating capital; development of policies regarding dividends, surplus, income, expenses, and capitalization in relation to the size of the business unit and type of integration.

404. Investments

Required of all seniors taking the Business Administration Course.

Analysis of government, state, municipal, public utility, railroad, and industrial bonds; discussion of tendency to regard stocks as investments; the tests of a good investment which may be applied to securities so that the untrained person can at least be aware of the nature of his investments and the protection available to him.

405. Sales Administration

Required of all seniors taking the Business Administration Course.

The sales problems of retailers, wholesalers, and manufacturing concerns; merchandising policy and research; functions of the various departments connected with sales activities such as credit, traffic, and advertising; selection and training of salesmen; operation of sales branches; sales promotion as it deals with selling methods, advertising, and the planning of sales campaigns.

406. Transportation

Required of all seniors taking the Business Administration Course.

A study of the services rendered in the movement of goods by all forms of transportation; rate making; discrimination; competition; cooperation; administration; terminals; and the general effects of all these problems on the public.

407. Money

Required of all seniors taking the Business Administration Course.

The nature and functions of money, the various monetary standards; the development of our monetary system; the factors affecting the value of money; methods and objectives of money and credit control; international exchange; analysis of recent money and credit developments.

408. Banking

Required of all seniors taking the Business Administration Course.

A study of the functions, management and operation of commercial banks; the development of banking in the United States; the policies of the Federal reserve banks as they relate to the volume of physical production, the national income and the price level; the relation between commercial banks and investment institutions; organization, operation, and economic effects of the Federal Reserve System; probable effects of recent changes in banking.

409. Production

Required of all seniors taking the Business Administration Course.

The problems of the production manager; location, design of plants, internal and external transportation, inventory control, methods of measuring activities of personnel, incentives, efficiencies, budgets, and organization.

410. Personnel Management

Required of all seniors taking the Business Administration Course.

The principles and practices in the management of employees which introduce positive stimuli into industrial endeavors and promote the industrial efficiency of labor, treating such factors as selection and placement, training, job analysis, promotion, turnover, health, morale building, and recreation.

412. Business Cycles and Forecasting

Optional. Five hours a week.

A description of the movements of different kinds of business cycles; the characteristics of each phase; theories as to cause; amplitude and duration; methods of measurement; and utility of the measuring devices.

414. Business and Government

Optional. Five hours a week.

The relations between business and government; laws designed to regulate and to control as well as to own business enterprises; taxation and association as methods to gain the same end; recent trends as they relate to railroads, public utilities, motor transport, air carriers, banks, and to agriculture and labor.

DEPARTMENT OF CHEMISTRY

The courses of study in this department are designed to give the fundamental training in chemistry that will enable graduates in chemistry to fill positions as assistants in commercial and industrial laboratories, to meet the demands of the medical colleges for prerequisite chemical training, and to continue the study of chemistry in graduate schools, if they so desire.

The courses of study embody training in the four great fundamental subdivisions of the science: inorganic, organic, analytic, and physical chemistry.

The department occupies nine commodious laboratories and four lecture rooms. Equipment and supplies are constantly maintained at a thoroughly adequate level.

Students taking the Chemistry Elective Course are required to take all the courses offered by the Department and also Mathematics 101 and 201; German 101 and 201; and Physics 201. Students taking the Pre-Medical Course are required to take Chemistry 101, 201, 301, 303, 404, 405 and 406; Mathematics 103; Physics 201 and 305; German 101; Psychology 301; and Biology 201, 301, and 401.

101. General Inorganic Chemistry

Required of all fourth classmen (freshmen). Lectures and recitations, three hours a week; laboratory, two hours a week.

Theoretical and descriptive chemistry, including the elements of modern chemical theory and discussion of some of the more common industrial processes.

201. Qualitative Analysis

Required of all third classmen (sophomores) taking the Chemistry or Pre-Medical Course; elective to others. Prerequisite, Chemistry 101. Lectures, two hours a week; laboratory, three hours a week.

The separation and identification of the ordinary cations and anions, with emphasis on the theory involved.

301ab. Quantitative Analysis: Volumetric

Required of all second classmen (juniors) taking the Chemistry Course and all first classmen (seniors) taking the Pre-Medical Course; elective to others. Prerequisite, Chemistry 101 and 201. Lectures, two hours a week; laboratory, four hours a week.

In the laboratory, volumetric methods of analysis are undertaken. In the lecture room, appropriate stoichiometric problems are considered.

301c. Quantitative Analysis: Gravimetric

Required of all second classmen (juniors) taking the Chemistry Course; elective to others. Prerequisite, the same as for Course 301ab. Lectures, two hours a week; laboratory, four hours a week.

In the laboratory, gravimetric methods of analysis are undertaken. As in Course 301ab, appropriate stoichiometric problems are considered in the lecture room.

303. Organic Chemistry

Required of all second classmen (juniors) taking the Chemistry or Pre-Medical Course. Prerequisite, Chemistry 101 and 201. Lectures and recitations, three hours a week; laboratory, three hours a week.

The aliphatic and aromatic series and heterocyclic compounds. Classroom discussions, lectures, and laboratory training in general reactions and synthetic methods.

401. Physical Chemistry

Required of all first classmen (seniors) taking the Chemistry Course; elective to others. Prerequisite, Chemistry 301, and Mathematics 101 and 201. Lectures and recitations, three hours a week; laboratory, three hours a week.

A study of the properties of solids, liquids, and gases, and of their relation to chemical constitution.

403a. Organic Preparations

Required of all first classmen (seniors) taking the Chemistry Course. Prerequisite, Chemistry 303. Lectures, one hour a week; laboratory, four hours a week. Advanced organic syntheses and technique with emphasis on purity and yield of products.

404bc. Advanced Topics in Organic Chemistry

Required of all first classmen (seniors) taking the Chemistry or Pre-Medical Course. Prerequisite, Chemistry 303. Lectures, three hours a week.

This course is designed to familiarize students with the survey of complicated molecules and their reactions, thus contributing to their facility for undertaking the study of bio-chemistry and other complicated fields of organic chemistry.

405a. Advanced General Chemistry

Required of first classmen (seniors) taking the Pre-Medical Course; elective to others. Prerequisite, Chemistry 101 and 201. Lectures, three hours a week. A comprehensive review of inorganic chemistry with special emphasis on equilibria, the periodic law, and the relation of chemical behavior to atomic structure.

406bc. Physical Chemistry for Pre-Medical Students

Required of all first classmen (seniors) taking the Pre-Medical Course. Prerequisite, Chemistry 101, 201, and Physics 201. Lectures, three hours a week.

This course is designed to permit Pre-Medical students who are lacking in mathematical training to survey the general method of investigation of physical chemists in *quasi*-mathematical form.

407ab. Advanced Quantitative Analysis

Required of all first classmen (seniors) taking the Chemistry Course; elective to others. Prerequisite, Chemistry 301. Lectures, two hours a week; laboratory, four hours a week.

Analysis of metals and alloys, iron ores, water analysis and boiler water control, fuels and fertilizer, and the application of modern instruments to the analysis of industrial materials.

408c. Qualitative Organic Analysis

Required of all first classmen (seniors) taking the Chemistry Course; elective to others. Prerequisite, Chemistry 303. Lectures, two hours a week; laboratory, four hours a week.

The classification, study of type reactions, and the identification of pure organic compounds and mixtures of organic compounds.

Biology and Geology

No attempt is made at The Citadel to maintain separate departments in these subjects. The courses are under the supervision of the Department of Chemistry.

The courses offered in biology meet the requirements of the more exacting medical colleges. However, since possibly no science has contributed in a larger manner to modern philosophy than these two, a knowledge of at least their elemental aspects is a distinct contribution to the general culture of the students. Accordingly, Biology 201 and Geology 301 are made available for election to all first and second classmen. Geology 303 is offered especially for engineering students.

201. Elementary Zoology

Required of third classmen (sophomores) taking the Pre-Medical Course; elective to others. Lectures, two hours a week; laboratory, four hours a week. The various classes of animal organisms from the standpoint of anatomy, physiology, phylogeny and ecology. Occasional lectures are given on some of the broader aspects of the subject such as heredity, cycle of the germ-cell, pathogenic organisms.

301. Comparative Vertebrate Anatomy

Required of second classmen (juniors) taking the Pre-Medical Course. Prerequisite, Biology 201. Lectures, two hours a week; laboratory, four hours a week. Comparative anatomy of vertebrate forms.

401ab. Embryology

Required of all first classmen (seniors) taking the Pre-Medical Course. Prerequisite, Biology 201. Lectures, two hours a week; laboratory, four hours a week. Embryology of representative vertebrates, including the amphibian and bird, with additional material on mammals.

301. Elementary Geology

Elective to all second and first classmen. Lectures, three hours a week; laboratory, two hours a week.

The various processes, such as crust movements, igneous influences, weathering, erosion, denudation, and transportation, which have been instrumental in shaping the earth; the composition, structure, and arrangement of igneous and sedimentary rocks; and a survey of the historical aspects.

303a. Engineering Geology

Required of second classmen (juniors) taking the Civil Engineering Course. Lectures, three hours a week; laboratory, two hours a week.

The origin and occurrence of the three major groups of rocks, their composition, resistance to weathering, and employment in engineering construction. The various processes of dynamic geology are considered with special reference to their application to engineering practice.

DEPARTMENT OF CIVIL ENGINEERING

The objective of this department is to give a course that will meet the basic educational requirements of the profession of civil engineering. This objective is sought through a coordinated program of liberal, scientific, and technological courses designed to broaden and enrich the student's general education as well as to lay the foundation for technical competence. A four-year undergraduate program does not provide time for more than a few of the most essential liberal courses; hence, with the exception of English, history, and the sciences, students of engineering must depend upon the liberal value of the technical and professional courses to achieve a reasonably well-rounded general education. Such liberal value as may be developed in these courses will depend to a great extent upon the skill with which instructors use them to awaken catholicity of interest and social consciousness in the students.

The program in the fourth class does not differ essentially from liberal programs in most undergraduate courses. In the third class, limited specialization begins by the introduction of courses in surveying, descriptive geometry, and graphic statics. In the second and first classes the time is devoted to basic professional courses. Throughout the four years the program is taught with the primary emphasis upon inculcating habits of orderly study, investigation, and sound reasoning rather than upon the mere acquisition of factual information. Constant attention, too, is given to engineering procedure in its wider sense, that is, the characteristic methods by which engineers conceive, design, and construct engineering projects.

Such a curriculum, ably taught, should prepare the better students to develop a mastery of such special fields as their subsequent employment may lead to, or to pursue more advanced work in the graduate schools of engineering. Its general educational value, if properly adapted to the student's interests and aptitudes, should meet the educational demands of good citizenship in whatever field the graduate enters.

The new concept of the engineer is that of a professional man thoroughly grounded in technology but also alive to the social and economic implications of his professional activities. It appears to be clearly the duty of engineering schools to fashion their graduates in this mold in so far as time limitations will permit.

The civil engineering curriculum is accredited by Engineers' Council for Professional Development.

There is a successful chapter of the American Society of Civil Engineers.

CIVIL ENGINEER DEGREE—For the award of the degree of Civil Engineer, see page 48.

BUILDING—In August, 1937, the new engineering building, known as Engineering Hall, was completed and occupied by the department. This structure is on the north of the campus and immediately west of Alumni Hall, and it houses all activities of the department. The building was designed specifically for the needs of civil engineering instruction, and it contains the necessary laboratories, drafting rooms, class rooms, store rooms, and offices for the department. In 1940 a third story was added to this building. The building is now complete and admirably adapted to its purpose.

DEPARTMENTAL LIBRARY—The Department maintains a small but well-selected library of technological books. Constant additions are being made. Current copies and files of leading engineering magazines are available in the reading room.

EQUIPMENT—There are now equipped and in use five laboratories—cement and concrete, asphalt, soil mechanics, structural materials, and hydraulics. The laboratories are equipped for the usual tests and experiments on both bituminous and non-bituminous materials and for a fairly wide range of experiments on structural materials, and in hydraulics.

In the structural materials laboratory the main items of equipment are —400,000 lb. Baldwin-Southwark hydraulic universal testing machine, with 36 in. working table and a clearance of ten feet for column testing, 150,000-lb. Olsen universal screw-power testing machine, Brinell attachment, cold-bend tool, shearing attachment, transverse testing equipment, three spherical-seated bearing blocks, plain and V-grips for tension specimens, self-adjusting tension grips for shoulder end specimens, Berry strain gauge, Whittemore strain gauge, H. F. Moore extensometer, Olsen compressometer, Riehle extensometer, deflectometer, several large machined cast iron bearing blocks, and numerous other items of minor equipment.

In the cement and concrete laboratory there is an adequate supply of equipment for every student to prepare his individual test specimens. This equipment includes four Buffalo 250-0.01-lb. scales, large platform scales, mixing tables, molds, moist closet, immersion tank, flow table, curing room, numerous weighing balances, steaming tank, electric oven, Riehle cement testing machine, Gilmore and Vicat apparatus, and the usual articles of minor equipment.

In the asphalt laboratory there are available a Rotarex, Engler viscosimeter, analytical balances, a chemical laboratory hood, constant temperature bath, penetrometer, drying ovens, hot plates, float test apparatus, melting point and flash point equipment, sieves, stop watches,

shrinkage apparatus, pressure cells, diamond core drill, diamond saw and grinding lap, Page impact machine, and the usual apparatus and chemicals found in a fairly complete laboratory.

The soil mechanics laboratory is equipped with consolidation apparatus, tri-axial shear machine, stabilized soil testing equipment, direct shear machine, permeameters, liquid limit device, shrinkage apparatus, Proctor compaction apparatus, soil hydrometers, dispersion stirrers, standard sieves, and other items necessary to conduct the usual tests on soils.

The hydraulics laboratory is equipped for a variety of experiments in the flow of water through pipes, orifices, and weirs. Water is supplied by a 500 g. p. m. centrifugal pump to a constant head tank. It is distributed to the several pieces of apparatus and returned through floor channels to the sump. Equipment includes Venturi meter, orifices, weirs, ranges of pipe, differential gauges, hook guages, weighing tanks and scales.

Adequate equipment is available for the surveying courses. This includes six transits, five levels, three plane tables, two sextants, two aneroid barometers, numerous hand levels, several compasses, standardized tapes, and the usual supply of rods, pins, tapes, chains, and other accessories. This equipment is stored in an instrument room and is in good condition.

A lathe, milling machine, drill press, grinder, electric welder, universal woodworking machine, power hacksaw, and a complete assortment of hand tools are available for construction and repair of apparatus.

Supplies—The department purchases and maintains a stock of drawing instruments and supplies of good quality. This material is sold to cadets at cost plus a percentage to defray overhead charges. Cadets may purchase their drawing outfits elsewhere, but care should be taken to secure articles of as good quality as those supplied from the department store room. All outfits submitted for use must be approved by the instructor concerned.

Audio-Visual Projection Equipment—Modern equipment has been installed for showing sound pictures, and much wider use is being made of this type of instructional aid.

101. Engineering Drawing

Four hours a week, three terms.

Use of instruments, useful geometrical constructions, lettering, orthographic projection, pictorial representation, auxiliary and revolved views, sectional views, intersections, developments.

201a. Descriptive Geometry

Two hours a week, one term.

A series of problems on points, lines, and planes in the third angle of projection and solved by the method of auxiliary planes. Problems

are selected with a view of emphasizing the practical applications of the subject.

202bc. Graphic Statics

Two hours a week, two terms.

An introduction to vector analysis, including the force polygon, stress diagrams, the funicular polygon, moment diagrams, shear diagrams, with specific application to the solutions of the simpler problems of stress analysis.

203ab. Machine Drawing

Four hours a week, two terms.

Machine and working drawings, representation of fastenings, springs, and other standard machine parts; precision dimensioning; detail and assembly drawings of simple machines; standardization of machine parts; tracing and blueprinting; freehand sketching.

203c. Topographical Drawing

Four hours a week, one term.

Map lettering, topographic symbols, reducing and plotting survey notes, profiles and cross sections, contours and contour problems, use of planimeter, mapping field notes made in surveying courses.

205. Plane Surveying

Three hours of recitation and two hours of field work a week for three terms. Open only to Third Classmen who have taken Math. 101 and are taking Math. 201 and to Second Classmen who have completed Math. 201.

Chaining; differential and profile leveling; compass surveying; verniers; transit surveying; note keeping; traverse computations; stadia surveying; elements of circular, transition, and vertical curves; computation of areas and volumes; use of slide rule and calculating machine; adjustment of instruments; errors and adjustments of observations.

301. Analytic Mechanics

Three hours a week, three terms.

Statics, with special attention to framed structures and the "free body" concept; space frameworks; friction; center of gravity and moment of inertia; kinetics, kinematics, and dynamics.

303bc. Mechanics of Materials

Three hours a week, two terms.

Elastic properties of structural materials; strains and internal stresses in beams, columns, shafts, cylinders, riveted and welded joints; combined stresses; deflection; principal stresses; unsymmetrical bending.

305. Highway Engineering

Three hours a week, three terms.

Highway economics and finance; administration and legislation; highway location and design; materials and types of surfacing; construction machinery and methods. This course is supplemented by laboratory work in C. E. 307 and C. E. 401.

307ab. Engineering Laboratory

Four hours a week, two terms.

Introduction to the use of laboratory machines and instruments; strength and deformation measurements of steel and ferrous alloys; properties of materials as determined by test results.

Methods of manufacture and fabrication of wood, metals, clay products and concrete; testing materials according to A. S. T. M. Standards.

308c. Stress Analysis

Four hours a week, one term. Prerequisite C. E. 301.

Theory of simple structures; reactions, shears and moments for fixed and moving loads on beams and trusses; stresses in various types of statically determinate framed structures; influence lines; loadings for highway and railway bridges; shop drawing of a roof truss.

309ab. Engineering Law

Three hours a week, two terms.

An elementary treatment of law in relation to engineering practice. Contracts, agency, real and personal property, sales, mechanics' liens, workmen's compensation laws; preparing, advertising, and awarding contracts; interpretation of contract documents; important court decisions; engineering relations and ethics.

309c. Specifications

Three hours a week, one term.

Origin, development, and form of specifications; standard specifications; sources of material; practice in writing and interpreting specifications and examination of current specifications of important structures.

401a. Concrete Laboratory

Four hours a week, one term.

Design, preparation, and testing of concrete mixes; testing of beams and columns; test checking of computed strengths and deflections.

401c. Asphalt and Soil Mechanics Laboratory.

Four hours a week, one term.

Laboratory tests of asphaltic materials with special reference to suitability for road surfacing. This course is coordinated with the instruction given on "black-top" roads in the course in Highways, C. E. 305.

Laboratory tests of the properties of various soils with a view of predicting their suitability for use in road construction, foundations, dams and dikes, and other structures. This course is coordinated with the course in Soil Mechanics and Foundations, C. E. 410c.

403. Reinforced Concrete Design

Three hours a week, three terms.

Prerequisite C. E. 303bc. Theory and design of reinforced concrete construction: slabs, beams, columns, footings, retaining walls, members carrying combined stresses. Design problems, including a reinforced concrete warehouse. Particular attention is given to current specifications for design and construction.

405. Structural Steel Design

Two hours of recitation and three hours of drafting a week, three terms. Prerequisites C. E. 303bc, C. E. 308c.

Theory of modern steel structures; analysis of railway and highway bridge trusses, including complete design of a highway truss; analysis and design of a mill building. Theory of statically indeterminate structures, method of work, slope-deflection, moment distribution; theory and design of plate girders.

407ab. Hydraulics

Three hours a week, two terms.

Pressure of water on plane and curved surfaces; stability of dams; flotation and metacenter; flow of water through orifices, over weirs, in pipes, and in open channels; elementary hydrodynamics.

408c. Hydraulics Laboratory

Two hours a week, one term.

Experiments in flow and pressure to supplement the theoretical treatment of hydraulics in C. E. 407ab.

409ab. Sanitation and Water Supply

Three hours a week, two terms.

A brief survey course. Sanitation; consumption of water; sources of supply, treatment, and distribution; nature, quantity, methods of treatment and disposal of sewage; relationship of water supply and sewage disposal to public health.

410bc. Soil Mechanics

Three hours a week, two terms.

Soil properties as related to engineering; classification of soils, analysis and determination of soil constants. Study of permeability, shear strength, compressibility and consolidation; bearing value of soils, pile foundations, earth dams, stability of slopes, retaining walls.

411. Term Paper

Required of all First Classmen as a prerequisite to graduation. Every member of the class will be assigned to a member of the teaching staff for advice and supervision of his work.

This paper is expected to show that the writer has made a survey of the literature of the subject treated and made such other appropriate studies and investigations as may be necessary to prepare a well-organized, informative, and authentic report. Students are expected to consult the books in the departmental library on the preparation of engineering reports and to make their papers conform to good practice as to form as well as to content.

DEPARTMENT OF EDUCATION

The courses in education are designed (1) to meet the usual state requirements for teachers in secondary schools and (2) to present facts concerning our present knowledge of education and the modern problems of education as matters of general as well as professional interest.

Courses in psychology, philosophy and the classics are also offered by this department.

The courses in psychology acquaint the student with the concepts employed and the results of experimental method in the field of general psychology and also provide instruction in some branches of applied psychology. A course in abnormal psychology is offered for pre-medical students.

Courses in philosophy and the classics are designed to give the student an opportunity to synthesize his entire educational background and outlook on life by learning sound processes of reasoning and by an acquaintance with the great civilizations and thinkers of the past.

Teacher Training

The teacher-training program at The Citadel specifically meets the South Carolina professional certificate requirements for teaching in secondary schools and will in general meet the requirements of other states.

In addition to the professional courses, which are required of all teacher-training students, a certain number of courses in the field of general education are prescribed as well as a specified number of credits in the subject-matter fields in which certification is sought. The Citadel prepares secondary school teachers in the fields of English, French, Spanish, History, Mathematics, and Science.

Education

301. Introduction to Education

Elective for second classmen (juniors). Three quarter hours credit.

A study of the fundamental interrelationships of school and society. The historical development of American educational institutions as affected by the forces of an evolving democracy. Comparison of American and European educational ideals and practices. The nature, aims, and organization of contemporary American education.

302. Educational Psychology

Elective for second classmen (juniors). Three quarter hours credit.

The functional application of psychological principles to secondary education. Consideration of the nature and problems of adolescence.

Study of the significance of heredity and environment, the nature of intelligence, the character and extent of individual differences, the principles of learning and mental hygiene. Education as adaptation, as individual unfoldment, as social adjustment, and as guidance.

303a. Principles and Problems of Secondary Education—I

Elective for second classmen (juniors). Three quarter hours credit. Education 301 or 302 is a prerequisite.

Definition and analysis of the fundamental issues underlying American secondary education. The principles most applicable to the solution of these problems. The aims, curriculum, scope and organization of the secondary school. Secondary education in a changing America. The impact of world conditions upon the secondary school. The American secondary school and the future.

303b. Principles and Problems of Secondary Education—II

Continuation of 303a. Three quarter hours credit.

401. Methods and Materials of High School Teaching.

Elective for first classmen (seniors). Three quarter hours credit. Prerequisite: six quarter hours credit in Education.

Study of the aims, methods, procedures, and materials employed in high school teaching; organization of subject-matter; motivation and direction of learning; development of attitudes, appreciations, and ideals. Classroom presentation of formal materials; conducting informal activities and experiences. Provision for individual differences, measuring educational outcomes. Observation of teaching, reports, discussions.

402. Directed Teaching

Senior elective. Nine quarter hours credit. Required of all who wish to qualify for state certificates. No student will be permitted to enter upon directed teaching who does not have credit for nine quarter hours in courses listed above or their equivalent.

Observation and practice teaching in local high schools under advisory teachers approved by the institution and the division of teacher education in the state department of education. Consistent visitation and supervision by the college. Individual and group conferences for discussion of problems.

403. Seminar in Secondary Education

Three quarter hours credit. For students who have credit for Education 402.

Definition and discussion of principles, methods, and problems related to experiences in directed teaching. Discovery of specific professional interests. Readings, reports, discussions.

Psychology

201ab. General Psychology

Elective for third classmen (sophomores). Six quarter hours credit.

The course aims to present the more generally known and accepted facts of modern experimental psychology with the purpose of leading the student to approach objectively the problem of understanding himself and other people, especially in connection with the adjustments necessary between individual needs and demands of the environment.

202c. Social Psychology

Three quarter hours credit. Prerequisite: Psychology 201ab.

A study of the individual in relation to his social environment with special attention to group behavior, social motivation, and individual adjustment.

301ab. Physiological Psychology

Required of pre-medical students. Six quarter hour credits.

The nature of external and internal stimuli and the functioning of the receptors, the central and autonomic nervous systems, the muscular effectors and the endocrine glands. The nature of the learning process and the development of personality.

302c. Abnormal Psychology

Required of pre-medical students. Three quarter hour credits.

Structural and functional disorders connected with sensation, perception, and association. Theories of personality. Discussion of the common neuroses and psychoses.

Philosophy

301a. Logic.

Elective for second and first classmen. Three quarter hours credit.

An attempt is made to transfer the students from naive traditionalism to critical judgment by means of an examination of the processes of thought and of the formal and material fallacies. This study is also introductory to the general field of philosophy.

302bc. Greek Thought

Elective for second and first classmen. Six quarter hours credit.

A brief survey of pre-Socratic philosophy, but primarily a study of Plato's *Republic* and Aristotle's *Politics*.

401a. History of Culture

Elective for first classmen. Three quarter hours credit.

This course, based on Arnold Toynbee's *A Study of History,* seeks to describe the origin, growth, and decay of past civilizations and the development of our own.

Classical Languages

101. Elementary Greek

Fundamentals of the Greek language. Recommended for students preparing for the study of medicine or theology.

201. Intermediate Greek

Continuation of Greek 101. Selections from Xenophon, Plato, and the New Testament.

101. Elementary Latin

Latin grammar and translation. Course varies with the background of the students. Recommended for pre-law students.

201. Intermediate Latin

Continuation of Latin 101. Cicero, Livy, and Horace.

Greek and Roman Civilization

301. Greek Literature and Civilization

No knowledge of Greek required. Representative selections in translation from Homer, Pindar, Herodotus, the tragic and comic poets, Plato, and Thucydides. Attention is given also to the social and economic history of Greece.

302. Roman Literature and Civilization

No knowledge of Latin required. Translations from Cicero, Vergil, Horace, Tacitus, Pliny, and Martial. The value these authors have as sources of knowledge of Roman social and economic life is stressed.

Note: These courses are offered alternately. Greek Literature and Civilization will be given in 1948-49.

Sociology

The following courses in the field of sociology are numbered in their logical order of sequence. However, no course is prerequisite for any other that is offered. All courses are twelve weeks in length and carry three quarter hours credit. They are open to second and first classmen only.

301. Introduction to Sociology

A study of the principles of sociology, embracing the factual knowledge concerning the history of culture with particular stress laid upon the social heritage, the formation and functioning of social groups, intergroup relationships, and group conflicts.

302. Social Disorganization

A study of the breakdown of society in its various forms with consideration of the causation as well as the resultant problems. Special emphasis is given to contemporary problems such as the broken family, juvenile delinquency, unemployment, and individual personality maladjustment.

303. The Contemporary American Family

A frank and comprehensive analysis of the problems confronting the modern American family with case studies treating the various phases of conflict within the family.

401. Criminology

A study of crime, its causes, conditions, prevention, and treatment. Theoretical views and hypotheses are supported by concrete facts. This method assures the student that any theory proposed or upheld is based upon realities and exact observation.

DEPARTMENT OF ELECTRICAL ENGINEERING

In accordance with the action of the Board of Visitors at its annual meeting in May, 1941, a Department of Electrical Engineering was established at The Citadel. Before any instruction was given in the advanced phases of the program, all of the men enrolled in it were withdrawn for service in the armed forces and the development of the department was arrested until the close of the war. Instruction in all the courses of the curriculum has just now been resumed. The curriculum for the first two years in this department is the same as in the Department of Civil Engineering. This department is established to meet the needs of many students who are attracted by the type of education which The Citadel offers, but who, in the past, have been compelled to go elsewhere to secure training in the field of their special interest.

Work in electrical engineering is not a new feature at The Citadel since introductory courses have been given for a number of years in the Department of Physics. This work is now being expanded to provide a curriculum in accord with that offered in leading engineering schools of the country. It is the purpose of the department to prepare men for professional work or graduate study in the field of electrical engineering and to give them training in as many of the elements of a broad general education as can be included in a program of professional study.

All of the laboratories and equipment of the Department of Physics are available for use in the Department of Electrical Engineering. Several additional laboratories and classrooms are devoted exclusively to its use. The dynamo laboratories are located in two rooms on the first floor of Bond Hall. They are equipped with machine benches supplied with outlets from a central switchboard and a plug-type distributing panel to provide flexible power connections. Direct current is supplied from a motor-generator unit and a bank of heavy duty storage batteries tapped to provide a variety of potentials. A polyphase transformer bank within the laboratory is wired to a junction panel to allow quick and ready connection for a wide range of single-phase, two-phase and three-phase voltages to supplement the laboratory supply lines for special uses.

The machines are of moderate size to allow the student to have intimate contact with them in their operation and to eliminate the necessity of the ready-made connections, intricate switch gear, and cumbersome metering circuits incident to the operation of heavy machines. The student can therefore be required to make his own connections and operate and control the machines without assistance from the instructor. With the exception of a few units designed particularly for the laboratory, the machines are commercial units of leading American manufacture. They

represent all modern types of small A. C. and D. C. equipment in wide use. All necessary meters, instruments, load components, control equipment, tachometers, oscillographs and accessories for these machines are conveniently accessible.

The electronics laboratory and the electrical measurements laboratory are located on the first floor of Bond Hall. Each laboratory has an adequate supply of modern apparatus in good repair. Plug-in distribution panels, multiple electric outlets at each table, and vibration-free brick piers are provided in each laboratory. Good photographic facilities are provided in several dark-rooms.

The machine shop on the same floor contains modern machine tools with individual motor drives, woodworking tools, benches, cabinets, and spray-painting equipment. Its facilities are adequate for construction of special apparatus as well as instrument repair and maintenance.

The courses required in the freshman and sophomore years are described under the departments in which they are given.

301a. Electrical Measurements

Required of students in electrical engineering.

Lectures and recitations. Five hours per week, first quarter. Modern methods of measuring current, resistance, electromotive force, inductance, capacitance and magnetic quantities. The calibration of electrical instruments is emphasized.

302. D. C. Circuits and Machines

Required of students in electrical engineering. Lectures and recitations. Three hours per week.

A course in direct current electrical engineering including flux, torque, current, electromotive force and speed relations in self-regulating machines; control of motors and generators; power losses and efficiency of machines; commutation and armature reaction; magnetic and electric circuit calculations. The text is supplemented by studies of simple transients and the design of the dynamo.

303a. Electrical Measurements Laboratory

Required of students in electrical engineering. Four hours of laboratory work per week, first quarter.

Laboratory measurements to accompany E. E. 301.

304. Dynamo Laboratory

Required of students in electrical engineering. Six hours of laboratory work per week.

A laboratory course to accompany E. E. 302.

305c. Heat Engines.

Required of electrical engineering students. Elective for students in other departments. Prerequisite, Physics 301 and calculus. Five hours a week. Third quarter.

Principles of energy transformation in steam engines, internal combustion engines, air compressors, and refrigerating apparatus. Fundamental thermodynamics.

401. A. C. Circuits and Machines

Required of students in electrical engineering. Lectures and recitations. Three hours per week.

A course in alternating current electrical engineering, involving the analytical and vector treatment of harmonically varying electromotive forces, currents, and power; in any combination of resistance, inductance and capacitance. Calculations of balanced and unbalanced polyphase circuits are emphasized. Construction, theory, design, and operation of alternators, motors, transformers, converters, and control equipment are studied.

402. Applications of Electron Tubes

Required of students in electrical engineering. Lectures and recitations, three hours per week.

Radio tubes, photo-cells, thyratrons, ignitrons, magnetrons, and miscellaneous gas-filled tubes in industrial applications.

403. Alternating Current Machines

Required of students in electrical engineering. Laboratory work. Six hours per week. A laboratory course to accompany E. E. 401.

404. Electronics Laboratory

Required of students in electrical engineering. Laboratory work. Four hours per week.

To accompany E. E. 402.

405. Electron Tubes

Required of students in electrical engineering. Lectures and recitations. Three hours per week.

Characteristics of electron tubes and their functions as detectors, amplifiers, modulators, oscillators, and rectifiers. Photo-cells and gas-filled tubes.

406a. Advanced A. C. Theory

Required of students in electrical engineering. Lectures and recitations, five hours per week. First quarter.

Treatment of transients and oscillatory circuits by the use of differential equations; analysis of complex A. C. waves; complex variable solutions of A. C. circuits; unbalanced polyphase circuits; applications of electrical solutions to mechanical systems.

407. Electron Tubes Laboratory

Required of students in electrical engineering. Four hours per week.

Laboratory course to accompany E. E. 405.

408b. Transmission Lines

Required of students in electrical engineering. Lectures and recitations. Five hours per week, second quarter.

Transmission lines; wave-filters; networks; equivalent circuits; elements of A. C. design.

409(1). D. C. Circuits and Machines

Senior elective, especially for physics majors. Lectures or recitations, three hours per week. Laboratory work, six hours per week.

The material of E. E. 302 and 304 adapted to the particular needs of students not enrolled in the Department of Electrical Engineering. Prerequisites, Physics 301 and calculus.

409(2). A. C. Circuits and Machines

Senior elective, especially for physics majors. Lectures or recitations, three hours per week. Laboratory work, six hours per week.

Prerequisite, E. E. 409(1). The material of E. E. 401 and 403, adapted to the needs of students not enrolled in the Department of Electrical Engineering.

411. Introduction to Electrical Engineering

Required of seniors in civil engineering. Lectures or recitations, two hours per week. Laboratory work, two hours per week.

An elementary course treating the material of E. E. 302 and 401 less fully. The course is designed to give students in civil engineering an acquaintance with the fundamentals of electrical engineering. Familiarity with commercial machines is gained by operation and testing in the laboratory.

413c. Power Plant Engineering

Required of seniors in electrical engineering. Lectures and recitations, five hours per week, third quarter.

A survey of power plant design and operation. Economic factors in design, construction, operation and power distribution.

414. Term Paper

Required of seniors in electrical engineering. Four quarter-hours credit.

A report based upon a survey of the literature in some phase of electrical engineering, supported by such investigations as may be needed to complete a paper of professional character, acceptable to the department. Each senior student will be assigned to a member of the department for assistance and supervision in the choice of a subject and the organization of the material. At least four hours a week during the second and third quarters will be devoted to this work.

DEPARTMENT OF ENGLISH

The objectives of this department are to make the student proficient in correct expression, whether written or spoken; to develop in him, through the reading and study of the great literature of England and America, an appreciation of literature from the point of view of both content and technique; to make him aware of the immense value of literature to man, not only as a source of entertainment, but as a conveyor of wisdom, as the vast depository of human experience, as an interpreter of historical and social change, as the mirror of life from the earliest times to the present day.

English is required of all students in freshman and sophomore years, and may be chosen as a major course of study in junior and senior years.

A student who elects English as his major course of study is required to take English 203 (The English Language), in addition to 201, in his sophomore year. If, for some legitimate reason, he cannot take 203 in his sophomore year, he must take it in his junior year. In both junior and senior year he must take two full-year courses, or the equivalent, in English. English 401 (Shakespeare) and English 403 (American Literature) are required courses; otherwise the student is free to choose from the courses offered by the Department in any given year. It should be noted, however, that 205a, b, c (Public Speaking), 315a, b, c (World Literature), and 405a, b, c (Creative Writing) are not courses which fulfill requirements for major work.

Courses to be taken outside the Department should be chosen in the light of the career that the individual student desires to follow. Therefore, they should be selected only after consultation with the Chairman of the Department of English.

101. Composition and Introduction to Poetry

Required of all freshmen.

A. Composition. The work of the first two quarters is designed to train the student in correct and effective writing. It includes a review of grammar, a systematic enlargement of the student's vocabulary, and constant practice in writing and analyzing paragraphs and themes. A book of essays is used to provide models and to stimulate the student's thinking.

B. Introduction to Poetry. The third quarter introduces the student to the critical study of poetry and to critical writing.

201. A Survey of English Literature

Required of all sophomores.

The course traces the development of English literature from the Old English epic *Beowulf* to the beginning of the twentieth century. Representative works of significant authors of the major periods are studied and discussed. Frequent themes will be required, which shall express the student's personal thought as stimulated by the masterpieces studied.

203ab. The English Language: Linguistics

Required of sophomores majoring in English. Open to other sophomores, juniors, and seniors.

Employing the methods of inductive study, this course introduces the student to the elementary phenomena of English phonology, morphology, and grammar. Historically, the approach is from present-day English backward through Early Modern English and Middle English to Old English. During the latter part of the course, some attention is given to the relationship of English to the Indo-European family of languages.

203c. The English Language: General Semantics

Required of sophomores majoring in English. Open to other sophomores, juniors, and seniors.

This course is of wider interest and greater value to non-English majors than *203ab*. General Semantics is designed to familiarize the student with (1) the distinguishable kinds of oral and written utterances, such as report language as opposed to judgments, inferences, or affective utterances, and the use and misuse of each; (2) the "psycho-neuro-logical" bases of the abstracting and classifying processes inherent in language; and (3) the importance of context, both physical and verbal, to the determination of the meaning of an utterance. Frequent exercises and examples of these uses and processes of language include contemporary advertising, propaganda, scientific reports, and compositions of literature toward the end that the student may use the several kinds of oral and written communication more knowingly and interpret and evaluate them more wisely.

205ab. Public Speaking

Open to sophomores, juniors, and seniors.

Through the study of the principles of speech-making and through constant practice in reading and speaking this course aims to acquaint the student with the methods of preparing speeches and of delivering them simply and directly. The speeches will deal with current public questions. Each student is afforded an opportunity to record and study

his own voice in an effort to eliminate any undesirable voice or speech traits.

205c. Argumentation

Open to sophomores, juniors, and seniors.

Training in reasoning, in the composition of argument both written and spoken; practice in the delivery of argument and in group discussion on current problems. This course is recommended for pre-legal students.

301ab. Medieval Narrative: Chaucer

Open to juniors and seniors.

Designed to give an introduction to Chaucer's language, narrative skill, and mastery of poetic forms, this course emphasizes reading in the original "The General Prologue" and representative stories from *The Canterbury Tales, Troilus and Criseyde,* and some of the shorter lyrics.

301c. Medieval Narrative: Non-Chaucerian

Open to juniors and seniors.

Such non-Chaucerian narratives as *The Pearl, Havelok the Dane, Tristram and Isolde, Aucassin and Nicolette,* selections from Gower, Langland, and others are read in translation for content, for revelation of cultural and social traditions, and for literary forms of the Middle Ages.

303ab. Seventeenth Century Poetry

Open to juniors and seniors.

A study of the poetry as represented by Jonson and the cavalier poets, by Donne and the metaphysical poets, and especially by Milton.

303c. Seventeenth Century Prose

Open to juniors and seniors.

A study of the prose as represented by Bacon, Walton, Browne, and Milton.

305ab. Restoration and Eighteenth Century: Prose and Poetry

Open to juniors and seniors.

Emphasis is placed upon the major writers of prose and poetry beginning with Dryden, including Pope, Swift, Addison and Steele, and ending with Boswell and Johnson. The minor poets of the period and contemporary departures from the classical mode are provided for in lectures and illustrative readings.

305c. Restoration and Eighteenth Century: Drama

Open to juniors and seniors.

As a survey of Restoration and Eighteenth Century drama, ten plays representative of heroic drama, comedy of manners, comedy of humors, sentimental comedy, comic opera, and tragedy are read for content, dramatic theory, and fashions in social thought and conduct.

307ab. The Romantic Movement

Open to juniors and seniors.

This course intends to show the changing attitudes toward life and art in the literature of the early Nineteenth Century, and to determine what the term *romanticism* implies in its application to each of the Romantic writers. The first quarter will trace the beginnings of Romanticism and concentrate on Wordsworth and Coleridge. The second quarter will present the poetry of Byron, Shelley, and Keats.

307c. The Romantic Movement

Open to juniors and seniors.

This course deals with the prose of the Romantic period. The essayists, Lamb, Hazlitt, and DeQuincy, will be emphasized, and the Romantic Novel will be examined.

309ab. Victorian Poetry and Prose

Open to juniors and seniors.

A study of the important poets of the period from 1830 to 1900, with emphasis upon Tennyson and Browning; and of the prose as represented by Carlyle, Arnold, and Huxley.

309c. Modern British and American Poetry

Open to juniors and seniors.

The aims of this course are to give the student an understanding of selected poets of the Twentieth Century, to present recent poetry as an expression of the life and thought of modern society, and to provide critical standards for future reading. Three or four outstanding modern poets will be studied intensively.

311ab. English Drama: Its Development

Open to juniors and seniors.

The purpose of this course is to trace the development of English Drama from its origin in medieval times to the beginning of modern drama in the middle of the nineteenth century. Representative plays of the various stages of the development will be studied in detail.

311c. Modern British and American Drama

Open to juniors and seniors.

A detailed study of a few representative plays to show the major trends in British and American drama since the time of Ibsen.

313. The English Novel

Open to juniors and seniors.

This course aims to give the student some idea of the antecedents of the English novel, to acquaint him with the work of the best English novelists from Defoe through Hardy, and to teach him how to read a novel intelligently. Twelve novels will be read and discussed.

315a. World Literature

Open to juniors and seniors.

The purpose of this course is to introduce the student, through standard translations, to the basic masterpieces of the Greek Classics, with special emphasis on the Greek Epic and Greek Drama.

315b. World Literature

Open to juniors and seniors.

This course presents Roman and Italian literature in translation, with the greater attention given to the Augustan Age and to Dante.

315c. World Literature

Open to juniors and seniors.

The aim of this course is to give the student an introduction to selected masterpieces of French, German, and Russian literature in translation from the Renaissance through the Nineteenth Century.

401. Shakespeare

Open to juniors and seniors. Required of those who major in English.

The course seeks to develop the student's appreciation of Shakespeare as dramatist, poet, and interpreter of life. A study of the Renaissance, of the Elizabethan theatre, of Shakespeare's forerunners, and of his life forms a background for the discussion of the fourteen plays read.

403. American Literature

Open to juniors and seniors. Required of those who major in English.

The aims of this course are to acquaint the student with the best writing of the best American authors from colonial times to the present, to indicate to him the intrinsic literary merits of this writing, and to show him how it reflects the development of the culture of this country.

405a. Writing the Short Story

Open to juniors and seniors.

Analysis of short stories, followed by practice in writing them.

405b. Writing Poetry

Open to juniors and seniors.

Analysis of poems, followed by practice in writing them.

N.B. Some of these courses will not be offered every year.

DEPARTMENT OF HISTORY

The Department of History endeavors to give the student an acquaintance with and an appreciation of our heritage; to enable him to see causes and effects, contrasts and comparisons as shown in the rise of modern civilization; to give him an accurate knowledge of the history of his own country and to familiarize him with its institutions and the democratic ideals which have influenced American life; to acquaint the student who elects this subject with the standard works in its various fields and to prepare him to pursue graduate work.

History 101 is required of all students in the freshman class. In the sophomore year students taking the History or Political Science Course must take History 201. Students electing History as a major are required to take History 301, 401bc, and three full year courses in History, selected from those offered in the junior and senior years with the approval of the Chairman of the Department. They must also take two years of a modern language, Economic Principles, and two specified courses in Political Science. For further details see the tabulation of the curriculum for the History Elective under the heading "Courses of Study".

Courses marked with an asterisk (*) are offered in alternate years or on demand.

101. A Survey of European Civilization since 1500

Required of all freshmen.

This course attempts to present the historical background of contemporary civilization, emphasizing those movements and developments which have had the most enduring influence and which help to clarify the problems of the present. It stresses the evolution of national states, the growth of representative and democratic institutions of government, the continuing progress of science, art and literature, the development of modern capitalism, and the origins of the international conflicts of our times. Throughout, an effort is made to present history in its broadest and, at the same time, its more practical connotations.

201. A Survey of American History

This survey of American History from the period of discovery to the present aims to give the student an understanding of contemporary civilization in the United States through a study of the historical experience of the American people. After a brief treatment of the growth of colonial self-government, the course emphasizes the causes of the Revolution, the framing of the Constitution, the development of political parties, sectional conflict, economic progress and problems, and foreign

relations. A special effort is made to understand the nature of American democracy and to assess the role of the United States in world affairs from 1789 to the present.

301. History of England

Required of all History majors.

This history of England from its origin to the present time gives special attention to the formation of the English constitution in the Middle Ages, to the growth of the limited monarchy, and to the evolution of Parliament. The characteristic institutions of the English political system and their influence upon other peoples are emphasized. Throughout the course the social and economic factors which conditioned political changes are stressed.

**303. The United States since 1900*

This survey of American social, cultural, economic and political development since 1900 emphasizes the increasing influence of the United States in world affairs, important political and economic changes, and the dominant cultural trends of the period.

**304. European History since 1870*

The course stresses the development of democracy in the leading European states before 1914, the growth of colonial empires, the causes of World War I, the efforts toward international organization, the rise of totalitarian states, and the origins of World War II.

401bc. Historiography and Historical Method

This course gives the student an introductory acquaintance with the history of historical writing, the sources of history and the methods of the historian. However, it is primarily designed to give the senior the guidance and time necessary to write the required senior thesis. Through this he gains practical experience in the use of primary sources.

402ab. History of American Diplomacy

This course emphasizes the ideals and principles which have actuated American diplomacy and the controversies which have arisen with other nations; the problems that have grown out of commercial and territorial expansion; and the international complications brought on by the Civil War, isolation, and intervention.

403c. The American Civil War and Reconstruction

The political, economic and social developments of the period will be emphasized, with some attention given to the military aspects of the war.

**404ab. Hispanic American History*

This is a survey of the economic, cultural and political development of Republican Hispanic America. While the twenty republics are studied

as a unit, the individuality of each is sufficient to warrant special attention. Therefore the student is encouraged, in his collateral reading, to concentrate on some one country.

*405c. *The Era of the French Revoluton and Napoleon*

This course gives a detailed analysis of the causes of the Revolution, followed by a survey of the principal events of the period, stressing the innovations of the Revolutionary governments, the causes of Napoleon's rise to power, his achievements in France and in Europe, and the reasons for his eventual downfall.

*406. *History of Colonial America*

The purpose of this course is to give the student a more detailed treatment of the foundations of American civilization than is possible in History 201. The motives of colonization, the evolution of self-government, the extension of the frontier, economic, social and religious life, the causes of the Revolution and the problems of the Confederation are studied.

*407. *The Social and Economic History of the Roman Empire and the Middle Ages*

This course presents an analysis of the social, political and economic influences which brought about the decline of the Roman Empire and the development of feudalism. Topics studied include: cultural movements, industry, agriculture, transportation, the spread of Oriental religions, and the rise of Christianity.

DEPARTMENT OF MATHEMATICS

The Mathematics Department offers courses designed to meet the needs of students who wish to do major work in Chemistry, Civil Engineering, Electrical Engineering, Mathematics, or Physics. A one-year required course is also given to students whose major work will not require mathematics above the freshman level. To students majoring in mathematics, the department offers a program which will qualify them to teach in secondary schools and to enter graduate schools in full standing. Standard mathematical techniques are developed in all courses taught, but the primary aim in all the work is to stimulate reasoning and to discourage routine substitution.

111a. Algebra

Required of freshmen who expect to do major work in Chemistry, Civil Engineering, Electrical Engineering, Mathematics, or Physics. Five hours a week.

A rapid review of high school algebra is followed by a study of the more important topics of college algebra.

112b. Trigonometry

Required of freshmen who expect to do major work in Chemistry, Civil Engineering, Electrical Engineering, Mathematics, or Physics. Five hours a week.

This is a full course in trigonometry, including the properties of the trigonometric functions and the solution of triangles.

113c. Plane Analytical Geometry

Required of freshmen who expect to do major work in Chemistry, Civil Engineering, Electrical Engineering, Mathematics, or Physics. Five hours a week.

The primary aim of this course is preparation for study of the calculus. The work includes a thorough study of the straight line, the conics, polar co-ordinates, and parametric equations.

102ab. Algebra

Required of freshmen who do not take Mathematics 111a. Three hours a week.

A rapid review of high school algebra is followed by a study of the more important topics of college algebra.

103c. Trigonometry

Required of freshmen who do not take Mathematics 112b. Three hours a week.

This course covers the essentials of trigonometry. Emphasis is placed on solving triangles.

201. The Calculus

Prerequisite, Mathematics 111a, 112b, 113c. Required of students majoring in Chemistry, Civil Engineering, Electrical Engineering, Mathematics, or Physics. Five hours a week.

A thorough study of the differential and integral calculus through series expansions. Ample drill in differentiation and integration is followed by much problem work from the fields of engineering and physics.

301a. Solid Analytical Geometry and Intermediate Calculus.

Prerequisite, Mathematics 201. Required of students majoring in Civil Engineering, Electrical Engineering, Mathematics, or Physics. Three hours a week.

The course in solid analytical geometry is followed by a study of partial differentiation and multiple integrals, and their applications in solving problems.

302bc. Differential Equations

Prerequisite, Mathematics 201. Required of students majoring in Civil Engineering, Electrical Engineering, Mathematics, or Physics. Three hours a week.

A study of the principles and devices used in solving differential equations. Numerous problems of application in the fields of engineering and physics are included.

303. Theory of Equations

Prerequisite, Mathematics 201. Required of students majoring in Mathematics. Three hours a week.

Topics studied in this course will include solutions of cubic and quartic equations, approximations of irrational roots, determinants, constructions with ruler and compass, and symmetric functions.

The following courses will be given when the demand is sufficient:

305. Modern Geometry

Prerequisite, Mathematics 201.

307. Higher Geometry

Prerequisite, Mathematics 201.

401. Advanced Calculus

Prerequisite, Mathematics 301.

403. Functions of a Complex Variable

Prerequisite, Mathematics 301.

THE ARMORY

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

The Citadel requires all cadets to complete satisfactorily the four-year course of the Senior Division R.O.T.C. instruction whether or not they are formally enrolled in the Reserve Officers' Training Corps. Cadets who are formally enrolled in and successfully complete the R.O.T.C. program and have had four years of education at a college or university level are eligible for commissions in the Officers' Reserve Corps.

The mission of the Senior Division R.O.T.C. is to produce junior officers who have the qualities and attributes essential to their progressive and continued development as officers in the Army of the United States.

The R.O.T.C. program consists of two parts, the basic course of two years duration pursued by all cadets regardless of arm of service, and the advanced course of two years duration, with camp, which is specialized for a particular arm or service. The summer camp is of at least six weeks duration and is obligatory for all cadets formally enrolled in the advance course. Normally, cadets will attend summer camp at the end of the junior year.

The Citadel offers advance courses leading to eligibility for reserve commissions in Infantry, Antiaircraft Artillery, Air Corps, Ordnance, and Engineer Corps.

The Citadel offers advance courses leading to eligibility for reserve commissions in Infantry, Antiaircraft Artillery, Air Corps, and Ordnance. An Engineer Corps unit probably will be activated starting with the 1947-48 school year.

Cadets entering the fourth class pursue the First Year Basic Course. Applicants for enrollment in other than the fourth class must present at the time of application, to the Registrar, The Citadel, a copy of their "Student Record" (W. D., A. G. O. Form No. 131), attested by the P. M. S. & T. of the school or college previously attended. Such applicants must have had prior R.O.T.C. training, for each year of college work, equivalent to that given at The Citadel. The decision as to credits to be received will rest with the P. M. S. & T. Veterans of World War II who enroll as cadets will receive credit toward advanced R.O.T.C. standing as determined by the Professor of Military Science and Tactics.

An outline of the subjects taught with the number of hours devoted to each follows:

101. First Year Basic Course

A minimum of three hours instruction per week. Required of all fourth classmen.

Military Organization	8 hours
Hygiene and First Aid	10 hours
Individual Weapons and Marksmanship	22 hours
Maps and Aerial Photographs	10 hours
National Defense Act and R.O.T.C.	4 hours
Leadership, Drill, and Exercise of Command	42 hours
Total	96 hours

201. Second Year Basic Course

A minimum of three hours instruction per week. Required of all third classmen.

Physical Development Methods	6 hours
Maps and Aerial Photographs	8 hours
Military Administration	8 hours
Evolution of Warfare	18 hours
Military Law and Boards	12 hours
Leadership, Drill, and Exercise of Command	44 hours
Total	96 hours

301. First Year Advanced Course, Senior R.O.T.C. (INFANTRY)

A minimum of five hours instruction per week. Required of all second classmen electing the Infantry Course.

Military Leadership, Psychology, and Personnel Management	16 hours
Geographical Foundations of National Power	12 hours
Military Law and Boards	12 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	96 hours
Communications	(7 hours)
Gunnery, Technique of Fire, and Fire Control	(23 hours)
Motors and Transportation	(7 hours)
Organization	(7 hours)
Tactics	(35 hours)
The Military Team	(10 hours)
Troop Movement	(7 hours)
Total	160 hours

301. First Year Advanced Course, Senior R.O.T.C. (ARTILLERY)

A minimum of five hours instruction per week. Required of all second classmen electing the Artillery Course.

Military Leadership, Psychology, and Personnel Management	16 hours
Geographical Foundations of National Power	12 hours
Military Law and Boards	12 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	96 hours
Aritillery Tactics	(8 hours)
Basic Gunnery	(42 hours)
Characteristics and Maintenance of Artillery Materiel	(8 hours)
Communications	(8 hours)
Motors and Transportation	(9 hours)
Organization	(6 hours)
Service of the Piece	(10 hours)
Troop Movements	(5 hours)
Total	160 hours

301. First Year Advanced Course, Senior R.O.T.C. (ENGINEER)

A minimum of five hours instruction per week. Required of all second classmen electing the Engineer Course.

Military Leadership, Psychology, and Personnel Management	16 hours
Geographical Foundations of National Power	12 hours
Military Law and Boards	12 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	96 hours
Bridge Design and Classification	(10 hours)
Camouflage	(6 hours)
Engineer Combat Principles	(22 hours)
Engineer Reconnaissance	(3 hours)
Explosives and Demolitions	(8 hours)
Job Management	(6 hours)
Military Roads	(8 hours)
Military Sketching	(6 hours)
Organization of Engineer Units	(5 hours)
Organization of the Ground and Field Fortifications	(12 hours)
The Place of Engineers in the Military Team	(10 hours)
Total	160 hours

301. First Year Advanced Course, Senior R.O.T.C. (ORDNANCE)

A minimum of five hours instruction per week. Required of all second classmen electing the Ordnance Course.

Military Leadership, Psychology, and Personnel Management	16 hours
Geographical Foundations of National Power	12 hours
Military Law and Boards	12 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	96 hours
Organization of the Ordnance Department	(10 hours)
The Place of Ordnance in the Military Team	(10 hours)
Maintenance and Supply Procedures	(15 hours)
Ammunition:	
(1) Materiel	(10 hours)
(2) Supply	(6 hours)
Automotive Materiel	(15 hours)
Artillery Materiel	(10 hours)
Small-Arms Materiel	(10 hours)
Fire Control Materiel	(10 hours)
Total	160 hours

301. First Year Advanced Course, Senior R.O.T.C. (U. S. AIR FORCE)

A minimum of five hours instruction per week. Required of all second classmen electing the Air Course.

Military Leadership, Psychology, and Personnel Management	16 hours
Geographical Foundations of National Power	12 hours
Military Law and Boards	12 hours
Leadership, Drill, and Exercise of Command	21 hours
Tactics and Technique	99 hours
History of the AF	(7 hours)
Organization of the AF	(5 hours)
AF Training	(5 hours)
AF Inspection Systems	(6 hours)
AF Statistical Control System	(6 hours)
AF Supply	(9 hours)
Transportation	(6 hours)
Navigation	(11 hours)
Aeronautics	(8 hours)
Meteorology	(7 hours)
Communications	(8 hours)
Air Intelligence and Combat Orders	(7 hours)

Air Operations ..... (10 hours)
Guided Missiles ..... (4 hours)
Total ..... 160 hours

401. Second Year Advanced Course, Senior R.O.T.C. (INFANTRY)

A minimum of five hours instruction per week. Required of all first classmen electing the Infantry Course.

Command and Staff ..... 12 hours
Military Teaching Methods ..... 12 hours
Psychological Warfare ..... 4 hours
Military Problems of the United States ..... 12 hours
Military Mobilization and Demobilization ..... 4 hours
Combat Intelligence ..... 4 hours
Leadership, Drill, and Exercise of Command ..... 24 hours
Tactics and Technique ..... 88 hours
Communications ..... (7 hours)
Gunnery, Technique of Fire, and Fire Control ..... (30 hours)
New Developments ..... (2 hours)
Supply and Maintenance ..... (5 hours)
Tactics ..... (36 hours)
Troop Movements ..... (8 hours)
Total ..... 160 hours

401. Second Year Advanced Course, Senior R.O.T.C. (ARTILLERY)

A minimum of five hours instruction per week. Required of all first classmen electing the Artillery Course.

Command and Staff ..... 12 hours
Military Teaching Methods ..... 12 hours
Psychological Warfare ..... 4 hours
Military Problems of the United States ..... 12 hours
Military Mobilization and Demobilization ..... 4 hours
Combat Intelligence ..... 4 hours
Leadership, Drill, and Exercise of Command ..... 24 hours
Tactics and Technique ..... 88 hours
Artillery Tactics, Advanced ..... (20 hours)
Characteristics, Capabilities, and Limitations, of Artillery Materiel ..... (8 hours)
Gunnery ..... (38 hours)
New Developments ..... (2 hours)
Supply and Maintenance ..... (4 hours)
The Military Team ..... (10 hours)
Troop Movements ..... (6 hours)
Total ..... 160 hours

401. Second Year Advanced Course, Senior R.O.T.C. (ENGINEER)

A minimum of five hours instruction per week. Required of all first classmen electing the Engineer Course.

Command and Staff	12 hours
Military Teaching Methods	12 hours
Psychological Warfare	4 hours
Military Problems of the United States	12 hours
Military Mobilization and Demobilization	4 hours
Combat Intelligence	4 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	88 hours
Airborne and Amphibious Operations (4 hours)	
Construction and Utilities (26 hours)	
Engineer Combat Principles (16 hours)	
Engineer Estimates and Orders (10 hours)	
Engineer Reconnaissance (8 hours)	
Engineer Signal Communications (8 hours)	
Engineer Supply (6 hours)	
River-Crossing Operations (6 hours)	
Water Supply (4 hours)	
Total	160 hours

401. Second Year Advanced Course, Senior R.O.T.C. (ORDNANCE)

A minimum of five hours instruction per week. Required of all first classmen electing the Ordnance Course.

Command and Staff	12 hours
Military Teaching Methods	12 hours
Psychological Warfare	4 hours
Military Problems of the United States	12 hours
Military Mobilization and Demobilization	4 hours
Combat Intelligence	4 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	88 hours
Maintenance and Supply Procedures (6 hours)	
Ammunition:	
(1) Materiel (5 hours)	
(2) Supply (5 hours)	
Automotive Materiel (10 hours)	
Artillery Materiel (8 hours)	
Small-Arms Materiel (5 hours)	
Fire Control Materiel (10 hours)	
Materiel Specialty Instruction (39 hours)	
Total	160 hours

401. Second Year Advanced Course, Senior R.O.T.C. (U. S. AIR FORCE)

A minimum of five hours instruction per week. Required of all first classmen electing the Air Course.

Command and Staff	12 hours
Military Teaching Methods	12 hours
Psychological Warfare	4 hours
Military Problems of the United States	12 hours
Military Mobilization and Demobilization	4 hours
Combat Intelligence	4 hours
Leadership, Drill, and Exercise of Command	24 hours
Tactics and Technique	88 hours

AF Supply

Introduction and Organization of the AF and AF Supply	(4 hours)
Publications (General)	(8 hours)
Stock Lists and Catalogs	(8 hours)
Procurement	(2 hours)
Requisitioning and Receiving	(8 hours)
Storage and Warehousing	(6 hours)
Property Accounting (Vouchers and Voucher Register; Stock Record Account)	(8 hours)
Issue of Supplies and Equipment (Memorandum Receipt; Shipments)	(8 hours)
Turn-In of Supplies and Equipment	(6 hours)
Stock Control	(2 hours)
Cost Accounting	(2 hours)
Service Stock	(4 hours)
Inventory	(6 hours)
Inspection	(2 hours)
Reclamation and Salvage	(2 hours)
Purchasing and Contracting	(2 hours)
Laboratory	(10 hours)

Or Statistical Control

Introduction, Purpose, and Scope of Statistical Control	(3 hours)
Reports Control	(4 hours)
Personnel	(29 hours)
Aircraft Reporting	(20 hours)
Supply and Maintenance Reporting	(12 hours)
Statistical Methods	(12 hours)
Miscellaneous	(6 hours)
Review and Critique	(2 hours)
Total	160 hours

DEPARTMENT OF MODERN LANGUAGES

It is the purpose of the Department of Modern Languages that students majoring in this subject shall receive a thorough knowledge of one language, written and spoken, a reasonable degree of competence in a second, and a good understanding of the important writers and literary developments of one or both of the civilizations which these languages represent. The aims of the department are both to develop cultural understanding and to prepare the student to follow a career requiring linguistic skill or literary knowledge. He is also prepared to do graduate work in a language if he so desires.

In a world being rapidly drawn together by improved means of communication, though the parts are still sharply differentiated in language, customs, and ways of thinking, it is important that an educated man should not be reduced to indirect and highly defective means of contact with all cultures other than his own. One cannot learn all languages, but certain ones such as French, German, and Spanish, are widely used outside the countries where they originated and are keys to a better understanding of civilization and mankind. For scientific research and for many commercial and professional positions, knowledge of languages may prove valuable or even essential. It is needed alike in war and peace, but its influence is for peace, since it tends to bring closer that understanding which ought to unite educated people of all nations.

Students who elect languages as their major field must satisfactorily complete seven courses in languages, including, for one language, at least two courses above the intermediate level. They must complete French 301. The exact sequence of their language courses will depend on the language chosen for their major work, and on the point at which their college work in each language may continue previous study. Students wishing to take a language as an elective may take any course for which they have done the prerequisite work.

In the courses in French, German, and Spanish Literature, the work of each quarter is a unit and credit will be given for its successful completion.

French

101. Elementary French

For students who elect French and have entered The Citadel with less than two units of that language.

The reading and writing of simple French; dictation; elementary conversation with drill in pronunciation; the fundamentals of French grammar.

201. Intermediate French

For students who have completed French 101, or have entered The Citadel with two or three units of that language.

French literature is introduced by selected readings from nineteenth century authors. Composition and conversation are based on the reading material. Grammar review to correct the student's faults in actual usage.

301. Introductory Survey of French Literature

Required for the Modern Language elective course. Open to students who have completed French 201.

Selected reading from representative authors forms a general survey of French literature from its beginnings into the nineteenth century. The student is encouraged to read extensively, and makes reports in French, with discussion.

The following courses will not all be given in any one year. They will be given when there is sufficient demand, and alternated according to the wishes and needs of the students.

401. French Composition and Conversation

Open to students who have completed French 301 with a passing grade, or who have completed French 201 with a grade of A or B.

Essentially a course in grammar review, composition, and conversation, designed to produce ease, fluency, and accuracy in the use of spoken and written French. To develop these qualities, and as training in literary appreciation, students are introduced to an elementary adaptation of the *explication de textes.*

403. Eighteenth Century French Literature

Prerequisite: 301.

The development of philosophical thought in the eighteenth century is traced through the writings of Montesquieu, Voltaire, and Rousseau. The beginning of Romanticism is shown in Rousseau and subsequent writers. Collateral reading and reports are required. Lectures in French.

407. Nineteenth Century French Literature

Prerequisite: 301.

French literature from Chateaubriand to Zola and Anatole France. The Romantic, Realistic, and Naturalistic movements, with special emphasis on the works of Balzac, Hugo, and Flaubert. Lectures in French, discussion, and reports on outside reading.

409. The Classical Period of French Literature

Study of the literature of the seventeenth century, in which France made its most distinctive and in many respects its finest contribution to the world's literature and culture. Especial attention is given to the drama of Corneille, Racine and Moliere.

German

101. Elementary German

For students who elect German and have entered The Citadel with less than two units in that language.

Pronunciation and the elements of German grammar. Written and oral exercises designed to give the student a practical control of the language. Translation of simple German into idiomatic English.

201. Scientific German

For students taking the Chemistry, Physics, or Pre-Medical course. Prerequisite: German 101 or two entrance units of German.

The grammar study begun in 101 is completed, and the greater part of the time is devoted to the translation of scientific German relating to Chemistry, Physics, and Biology. Special stress is placed on sentence structure and word-building.

203. Intermediate German

Prerequisite: 101, or two entrance units of German.

Completion and review of elementary grammar, reading of selected works from German literature, and conversation to develop the use of natural and colloquial German.

301. German Literature of the Nineteenth Century

Prerequisite: German 201 or 203.

Representative works of outstanding novelists and dramatists will be read, with discussion of the literature of the period. Assigned reading and reports.

401. Goethe's Faust

This, the greatest of Goethe's dramas, will be studied in connection with his life and from the point of view of the importance of its message to the modern world. An interpretation of the drama, its genesis and growth. *Faust*, Part I, and selections from Part II. *Faust das Puppenspiel,* and its relation to Goethe's *Faust.* Lectures, readings, and reports.

Spanish

101. Elementary Spanish

For students who elect Spanish and have entered The Citadel with less than two units in that language.

Essentially a drill course in the reading, writing, and speaking of simple Spanish.

201. Business Spanish

For students in Business Administration who have completed Spanish 101, or have two or three entrance units in Spanish.

Reading of historical, geographic, economic, and cultural material on Latin America. Classroom discussion and composition in Spanish.

203. Intermediate Spanish

For students who have completed Spanish 101, or have two or three entrance units in Spanish.

Continuation of the work of Spanish 101, with reading of the works of nineteenth-century or contemporary writers. Classroom composition and conversation. Credit is not given for both 201 and 203.

301. Spanish Literature of the Golden Age

For students who have completed 201 or 203, or have four entrance units in Spanish.

The literature of the late sixteenth and the seventeenth centuries, the age which produced the characters of Don Quixote and Don Juan. Works of Cervantes, Lope de Vega, Tirso de Molina, Calderon, and others are studied. Given in alternate years with Spanish 303.

303. Spanish-American Literature

For students who have completed 201 or 203, or have four entrance units in Spanish.

Leading works from Mexico and Central and South America are studied, with both individual and class reading. Lectures and conversation in Spanish. Given in alternate years with Spanish 301.

DEPARTMENT OF PHYSICS

It is the purpose of the Department of Physics to offer to all students at The Citadel a fundamental course in one of the basic physical sciences, to afford to pre-medical students an adequate preparation in physics for admission to the best medical schools, and to offer to students specializing in other departments such advanced courses in physics as are necessary to meet their needs. To students taking their major work in the Department, it offers a program of courses sufficient to enable them to enroll as graduate students in full standing at the leading universities, or to fill positions as assistant physicists in the government service and in industrial laboratories.

The rooms of the Department are located on the first and second floors at the east end of Bond Hall. On the second floor are the offices of the Department, a lecture room seating about one hundred and fifty, two smaller lecture rooms, and two general laboratories for sophomore work. On the first floor are a photometric laboratory, a laboratory for the junior work of physics majors and pre-medical students, a laboratory for senior work, and a machine shop. A storage battery room containing a 64-volt storage battery, clock relay room and storerooms are also located on this floor. Distributing panels, connected with the main electrical switchboard, are located in the junior and senior laboratories. At all laboratory tables and lecture desks electric power, either D. C. or A. C., of any desired voltage is available either from the storage battery, a direct current generator, or the commercial, A. C. power supply. The lecture rooms and laboratories are conveniently arranged and adequately equipped.

A good supply of apparatus and measuring instruments gives excellent facilities for individual experiments and demonstration work. The machine shop is equipped with grinder, drill-press and screw-cutting lathes, all independently operated by separate motors, and a complete assortment of tools for wood and metal work.

Students taking the Physics Course as their major work are expected to take a total of thirty-two semester-hours in the Department, including all the courses offered except the pre-medical course, 305, 306. In addition they are required to take a total of twelve semester-hours in the Department of Electrical Engineering. They must take Mathematics 111a, 112b, 113c, 201, and 301 and German 201. They are advised to include among their electives Mechanical Drawing (C. E. 101), and Chemistry 201.

201. Introduction to College Physics

Required of all sophomores. Recitations, three hours a week; laboratory work, two hours a week.

Assumes no previous knowledge of physics; covers the less mathematical portions of mechanics, heat, electricity, sound, and light. The laboratory work consists of about thirty individual quantitative experiments based on the fundamental principles studied in the lecture room.

301. Advanced General Physics

Junior elective. Lectures and recitations. Three hours a week.

A continuation of Physics 201; covers those portions of mechanics, heat, and electricity not included in the earlier course and an introduction to the study of sound and light.

303. Laboratory Physics

Junior elective. Six hours a week.

Except for necessary explanation, discussion and problem work based on the experiments, the entire time is devoted to laboratory work. The experiments are of a more advanced character than those in Physics 201 and involve the use of most of the standard instruments of physical measurement. About seventy experiments are performed, affording a study from the laboratory standpoint of most of the topics considered in Physics 301.

305. Physics for Pre-Medical Students

Required of all pre-medical students. Lectures or recitations, two hours a week; laboratory work, two hours a week.

Designed to meet the requirement in laboratory physics for admission to the best medical schools. About fifty individual quantitative experiments are performed, dealing with molecular physics, heat, electricity, sound and light.

401. Advanced Physics

Senior elective. Lectures and recitations, three hours a week.

The subject-matter will be varied from year to year to meet the needs of the students electing the course. For 1948-1949 the course is as follows:

401ab. Wave Motion, Sound and Light

The general equations of wave motion developed and a study made of their application to sound and light. The velocity of sound and of light waves, reflection, refraction, dispersion, diffraction, interference, and polarization studied in theory and by experiment. The laboratory work consists of about eight experiments in sound and about twenty-five in light.

401c. Radio Communication and Applications of Electron Tubes

Maxwell's equations for an electro-magnetic wave. The use of such waves in radio communication. Special laws for radio circuits. The vacuum tube and its use as detector, amplifier, oscillator and modulator. Ultra-high frequencies and television. The laboratory work includes measurements of inductance, capacitance, radio-frequency resistance, and a study of the characteristics of vacuum tubes.

401-A. Advanced Physics

Senior elective. Lectures and recitations, three hours a week.

For the benefit of students who are interested in the recent developments of physics and who cannot devote to the subject the time required for the laboratory work of course 401, this course covers, in a series of lectures and demonstration experiments, most of the topics studied in the other course. Open to all students in the senior class who have sufficient foundation.

403. Advanced Laboratory Physics

A laboratory course to accompany Physics 401. Six hours a week.

DEPARTMENT OF POLITICAL SCIENCE

Woodrow Wilson wrote more than a half century ago: "It is a strenuous thing, this living the life of a free people." It has become more strenuous in recent years as our free society has become more complex and the scope of governmental functions has necessarily expanded over all human affairs. With this expansion, the importance of studying government has increased in all its ramifications and branches.

It is the function of political science to investigate the phenomenon of government, to learn how it is organized, how it operates, and what it achieves. The curriculum at The Citadel is designed to give the student a background in the political, social, and economic developments of the modern world. This program of study offers a unity and concentration by combining the subjects that deal with human conduct—a synthesis on mankind in society. It seeks an understanding and interpretation of tendencies, a breadth of view, and a developed spirit of scientific inquiry; it undertakes to provide a broad, liberal education that is calculated to prepare a student for whatever his chosen profession or business may be; it is likewise designed to supply the basic training for effective leadership in both private and public life.

While political science at The Citadel concentrates its studies upon political authority or government, it is remembered that political science does not stand alone, that it is only one segment or section of the so-called "social sciences." These sciences as a group are interested in human society, in the relations that exist among men living in communities. This close interrelation of the several social sciences is recognized in the curriculum that requires certain history and economic courses as specified minors and recommends sociology, psychology, and philosophy as free electives in mapping out the program of study for the major in political science.

Those electing political science as the subject of their major interest are required to take American Government (Political Science 201) in the sophomore year. This is the basic course, for simple obligations of citizenship demand that every American citizen know his own government more intimately than he knows any other. Moreover, this knowledge serves as a valuable standard of comparison in the later study of other governments.

For the requirements in the junior and senior years, see the tabulation of the political science curriculum under the heading, "Courses of Study". Two years of a modern language are required. There are four electives which may be selected according to the individual's requirements and interests.

201. Survey of American Government

Required of sophomores electing Political Science. Open to other sophomores.

A comprehensive survey of the American political system is undertaken in this course. A careful study is made of the structure and operation of national, state, and local institutions. The course aims to develop in the student an appreciation of the underlying principles and to give him an insight into the responsibilities of citizenship.

303ab. International Law

Required of juniors electing Political Science.

This course outlines the development of those principles of law generally recognized as governing the intercourse of modern states. It embraces a study of the general principles of public international law; of the legal relations of states and of individuals, as developed by positive agreement in the form of treaties; by common usage, as shown in legislation, in decisions of municipal courts in the United States and abroad and of international tribunals; and by diplomatic practice and the conduct of nations.

304c. American Foreign Relations

Open to juniors and seniors. Required of juniors electing Political Science.

This is a study of the organization of the American government for the conduct of foreign relations, the control exerted by its various branches therein, and the methods of procedure followed. Attention is given to the important developments of the past few years, which have thrown new light upon different phases of our foreign relations.

305a. American Parties and Politics

Required of juniors electing Political Science.

A survey of the composition and activities of parties and of the main lines of controversy regarding public policy. A study is made of the fundamental and current practice of politics in city, state, and nation, stressing such topics as motives in politics, the relation of parties to other groups, party organization, nominating systems, campaign methods, and the programs and tendencies of major and minor parties.

306bc. Public Administration

Required of juniors electing Political Science.

A topical analysis of the principles of administrative organization of state and national governments of the United States, with special note taken of the implications of recent changes. The broad problems thus approached include delegation by the legislative body, administrative integration, personnel management, administrative appeals, and judicial review.

401. The American Constitution

Required of seniors electing Political Science. Open to other seniors who receive permission of the instructor.

This course begins with a study of the English and colonial origins of the American governmental system. With a view to an appreciation of the underlying philosophy and basic principles of the Constitution, attention is given to the part which social, economic, and political conditions played in the framing of the organic law. The third quarter is devoted to a study of the decisions of the Court which have served as landmarks in the development of the American constitutional system. Emphasis is placed upon the problems of the present day.

403a. Comparative Government

Open to juniors and seniors. Required of seniors electing Political Science.

A comparative study of the governments in the principal countries of the world.

405bc. International Relations

Open to juniors and seniors. Required of seniors electing Political Science.

Special attention is given to recent and contemporary developments in world politics, with a view to preparing the students for a more intelligent understanding of world conditions. National policies of the major powers in regard to military preparedness are emphasized in order to illustrate the fundamental relation of armaments to government and of military power to diplomacy.

407. Political Theory

Open to juniors and seniors. Required of seniors electing Political Science.

This course is designed to give a survey of the evolution of systematic political reasoning and to provide a foundation for the understanding of recent and contemporary political ideologies.

DEPARTMENT OF STUDENT AFFAIRS

This department has the following objectives:

1. To assist in college administration.

2. To co-ordinate the efforts of alumni and other friends of the college in promoting the welfare of The Citadel.

3. To encourage wholesome student activities of every type in an attempt to enlist the interest and active participation of every student in at least one activity.

4. To supplement the training given by the departments of instruction.

5. To provide services and facilities which contribute to the comfort and guidance of students.

Athletics are directed by committees composed of faculty, cadets, veteran students, and alumni. All other cadet activities are directed by the Cadet Activity Committee and its sub-committees.

The Director of Student Affairs is secretary to all committees and serves as treasurer for all student activity funds. All moneys received by him are acknowledged by receipt and deposited in the bank to the credit of the activity concerned. Withdrawals are made by check with the approval of the president of The Citadel. Accounts are audited monthly and published.

To help support the activities each student pays a student activity fee of $8.75 per quarter. This fee is distributed to the various activities as needed.

ATHLETICS

Since the fullest advantages of academic and military life can be derived only by men of sound physique, every student is encouraged to participate in sports so far as his duties will permit. In our increasingly complex interdependent society the lessons of loyalty, cooperation, and self-sacrifice learned in athletics are of importance. It is the policy of The Citadel to give every reasonable encouragement to the physical development of students. Fortunately the climate of Charleston makes possible a year-round program of outdoor sports.

The members of the athletic staff are competent and experienced coaches, who use due precautions to prevent injuries in training or in contests. A physician is in attendance at every scheduled athletic event.

An extensive program of intramural athletics assures every student an opportunity to participate in some form of organized sport. Keen interest has been exhibited in the inter-company competitions in touch football, basketball, boxing, tennis, golf, swimming, softball, volleyball, track, soccer, boating, wrestling, and other sports.

The Citadel is a member of the Southern Conference. Teams engage in intercollegiate competition in football, basketball, boxing, tennis, golf, baseball, and fencing.

The location of The Citadel on the banks of the Ashley River provides natural facilities for water sports. The large number of students in the Yacht Club testifies to the popularity of such sports.

OTHER CADET AFFAIRS

The system at The Citadel requires that every cadet spend most of his time within the limits of the campus. No cadets leave the campus except at stated leave periods or by specific written permission for a stated purpose. This imposes on the college the duty of providing on the campus the requisites of a stimulating religious, social, intellectual, and recreational life. The college is interested in guiding the development of every student as an individual; hence, to supplement the formal training carried on by the academic and professional departments, the department of student activities is charged with the duty of planning, coordinating, and supervising a variety of activities to enlist the interest and stimulate the development of students. These include literary and aesthetic pursuits, athletics, and social and recreational activities.

Detailed information concerning the various activities supervised by the Student Activity Committee will be found in the following paragraphs.

Publications

The Bull Dog is published semi-monthly by a staff of students. It serves as the campus newspaper and is financed by an allotment from the Student Activities Fee, augmented by the revenue from subscriptions and the sale of advertising space.

The Shako, the literary magazine, is published three times a year. It is supported by voluntary subscriptions, the income from advertisements, and an allotment from the Student Activities Fee.

The Sphinx is published annually by a staff of students. This publication serves as a semi-official record for the year. By means of copy and photographs, the faculty and staff, the student classes, the cadet military organization, the athletic activities, the social affairs and other student programs are portrayed vividly to preserve memories of student life for posterity.

Literary

Three student societies offer opportunities for discussing subjects of cultural interest and for developing proficiency in public speaking: the Calliopean Literary Society, the International Relations Club, and the Round Table.

The Calliopean Literary Society sponsors forensic interests, including radio speaking, intramural and intercollegiate debating, and oratory. Membership is open to all students.

The International Relations Club is devoted to the study of contemporary world economic and political problems. Membership is restricted to those students especially interested in government and politics.

The Round Table is a discussion group with a limited membership. Elections are made from lists prepared by the faculty of those students with marked intellectual interests.

The Citadel Dramatic Club offers to students an opportunity to participate in theatrical activities—acting, directing, technical work, and play-writing. The club presents several plays each year.

Musical Activities

The student orchestra, under the direction of Colonel C. F. Myers, Jr., furnishes the music for all informal dances, and is authorized to accept outside engagements during leave periods.

The glee club, under the direction of Lt. G. M. Nichols, serves as choir at chapel services, gives programs in Charleston churches, and makes an annual trip to several colleges in the state.

The college band, under the direction of Lt. S. F. Walls, provides the music for parades, guard mount, and other official ceremonies.

The music club was formed to bring together in congenial association all students interested in good music. These students have for their use the records and phonograph given The Citadel by the Carnegie Foundation.

The concert orchestra is complementary to the glee club. Its purpose is the development of instrumental musical talent.

Social Functions

The Citadel dances, managed and controlled by the Standing Hop Committee, are an important part of the social life of the Corps. Frequent informal dances are given, the music being furnished by the student orchestra.

There are five formal dances each year: The Thanksgiving Hop, the Christmas Hop, the Senior Hop, the Easter Hop, and the Commencement Hop. These are financed by the Class Fund, a fund made up of quarterly optional payments of $15.00 (Fall quarter, $7.00; winter quarter, $4.00 and spring quarter, $4.00) a student, of which 20% is an admission tax. A student paying this fee is admitted to all formal dances without further charge. Making separate payments for the individual dances increases the cost so much that patrons are advised to

include the payment to the Class Fund with each quarterly instalment paid the quartermaster in order that the student may enjoy these dances at a minimum cost.

The Citadel hostess, Mrs. Jesse Gaston, serves as adviser in matters pertaining to the social activities of the college. Under her supervision classes in dancing are conducted, informal dances are held, and a registry of suitable homes for students' lady guests is provided.

CLUBS AND SOCIETIES

The following organizations have been established for the several purposes indicated by their titles: Knox Chemical Society; Student Chapter, American Society of Civil Engineers; Economics Honor Society; Pre-Medical Club; Yacht Club; Block "C" Club; Hunting Club, and Riding Club.

THE COMMANDANT'S DEPARTMENT

The Commandant of Cadets is charged with the maintenance of discipline. He controls the Corps of Cadets in their daily routine of duties, grants leaves and privileges provided by regulations and maintains conduct records of all cadets. The department exercises supervision over barracks, controls the cadet guard, the Officers in Charge and keeps the President of the college informed of all matters pertaining to the conduct and discipline of the Corps of Cadets.

The Citadel is a military college and it is therefore essential that a high standard of discipline be maintained. Through a system of merits and demerits, a record is kept of the conduct of each cadet. This record materially influences both his class and military standing. In the cases of cadets who fail to respond to ordinary corrective measures, privileges are curtailed. Any cadet exceeding the allowed limit of demerits for the year is reported to the Board of Visitors for dismissal.

By instruction and example cadets are taught to be neat in person and in uniform. Daily inspections of rooms insure cleanliness and good order. Through individual personal contacts and group meetings, cadets are encouraged to uphold the traditions of The Citadel and the standards of honor, integrity and courtesy, which are an outstanding mark of The Citadel cadet and gentleman.

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